CHICO STATE NORMAL SCHOOL

BULLETIN No. 6

GEOGRAPHY

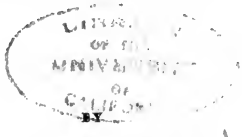
FOR THE

FIFTH AND SIXTH GRADES

A COURSE OF STUDY

. . . . . AND . . . . . .

TEACHERS' MANUAL



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A Course of Study and Teachers' Manual

BY

C. K. STUDLEY

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Printed at State Printing Office, Friend Wm. Richardson, Superintendent.

PREFACE.

In the fifth grade we are ready to take up in detail those things immediately around us and thus finish the foundation for future work no matter what the locality.

After the home region it is as easy to follow one sequence as another and many times easier to follow a text than to set up an arbitrary sequence and try to adapt the text to suit its needs. Since following the text solves many difficulties and offers few obstacles, the reasonable thing to do is to follow the book that has been prescribed and make the best of it by adding to or taking from it as the case demands. The adding to it can best be done through many of the excellent supplementary readers.

As there are many things thrown into a description of any region for the sake of making it as complete as possible it becomes necessary for the teacher to select and evaluate the different topics. Some are worth practically nothing while the others are of the utmost practical importance. It is not an easy matter to say offhand just what is to be kept in and what is to be left out unless one takes a certain standard and judges all topics and details of content by that one standard. If that is to be done, the only legitimate standard will be the standard of use. Of what use is it or of what use will it be? This is the question that must be answered. If the point will not defend itself when analyzed thus it must be rejected as a minor point. Those things will be important that are of value in the everyday walks of life and not those that serve only a special purpose.

Since each teacher has several subjects to teach and consequently has a relatively small amount of time to be given to each subject she does not have the time to go through the entire course in geography to evaluate the various topics. It is deemed advisable, then, to go through the course with her and suggest the value that each topic bears to the whole course so that she may, at a glance, see what may be a proper proportion of time to be given each topic. It can hardly be hoped that the standards set up here are absolutely accurate in every case, but they are at least approximately correct, so that those who follow the course can easily make the necessary allowance one way or the other and soon have it adjusted to their ideas.

It is necessary to make such evaluation since most text-book writers are more or less indiscriminate in treating the topics. Few seem to take the

time and trouble to answer for themselves the question "Will this be used in after life?" or, "Is it used by the general run of educated people?" The test of use should determine the time valuation in all cases. We must not, however, confuse the use from a cultural standpoint with use from a financial standpoint. From the latter few things would remain in the curriculum to be taught, but from the standpoint of the former the field is a much broader one and it is this interpretation that has been placed upon the selection of the material that follows.

In the Appendix will be found such special items as are referred to in the course of this Bulletin, such as, How to make touch paper, How to make a paper windmill and Elementary Study of Weather Maps.

The numbering of the divisions and topic headings are the same as are used in the State Series Introductory Georgraphy, and in addition to this, reference is made to the pages in the above where the topics may be found in case the teacher needs it for cross-reference.

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PART I.

HOME GEOGRAPHY.

Introduction.

Any one who has given the subject much thought knows the difficulty of writing a text-book in Home Geography, because each region has its own particular surroundings; each community has its own particular makeup and popular customs; each school its own particular problems, many of which cannot be foreseen and especially by any one outside of the school itself.

Since schools are made up of the children of parents in all vocations and in all sorts of conditions of advancement, the knowledge that the pupils possess will vary from school to school, and in fact from year to year in the same school. This will necessitate a slight readjustment in the text-book from place to place and from year to year in the same place. For some localities it will be useless to emphasize certain things that are so common that not a shadow of a doubt remains as to whether or not the children have seen these things and know them thoroughly. To give several lessons on a subject already familiar to them and not bring in new material to supplement the old, is apt to get them disinterested and to brand the geography work from the start as a bore. So when home geography does not awaken the interest it should or does not drive home the information desired, it is not the fault of the writer of the book used, but more often the fault of the region and the community for not being like every other region or community. Then, too, the teacher may well look to herself for a part, at least, of the explanation as to why they are not interested in the most essential as well as the most interesting of all geography.

Home geography is essential because it is to serve as the foundation upon which all the future work in geography must be built. In it the child is to obtain the tools, so to speak, by means of which he is to be enabled to pry into the work of the future and understand the meaning of the various phases of geography work and their relation to himself as well as to the entire world. It is through it that general geography is to be made a real live subject with an interest as keen as the interest in the things of his everyday life. Without this foundation he is at a disadvantage in all of his future work because he does not possess those experiences to which he may turn for comparison and consequent enlightenment in those things which he has never seen but which may be similar to those immediately surrounding him and about which he should know a great deal.

How simple would be the teacher's work if regions and people were alike the world over! One would need to study just his own surroundings

and dismiss the subject from his mind as being completed. Under such conditions there would be little need of a teacher. But since it is true that things are so unlike in many ways there will always be use for the skilled teacher. The teacher must take this generalized home geography text and work it over to suit the needs of her particular locality and also the needs of the class at hand so that there will be no loss of time in going over details already learned. At the same time she must be careful not to omit any essential detail that is not thoroughly understood. This means that the task of teaching the geography of the schoolyard and surrounding country is by no means a simple one if it is to be done properly. Furthermore, the complete adjustment of the text-book to suit the region requires a lot of extra time, and where the teacher has many other subjects to teach there is not sufficient time for the proper preparation for the work. But with this adjustment already made (except in minor details) the task for the teacher should be no more difficult than in any other subject in the school. In fact after the first time over it should be much easier than in a subject where the teacher is left to her own devices.

It is for the purpose of making this adjustment that this Bulletin is put forth. The emphasis has been placed on those parts that seem to be the most important and some details added where it was thought advisable to do so for the sake of presenting the subject in its true relation to man. Suggestions as to possible experiments, models and pictures have been made, so that on reading it over the teacher will readily see what is needed and where it is best introduced. Thus the teacher will have ample time to perfect the details of her instruction and still not be overburdened with the geography work.

The first thing that the teacher must realize is that home geography is the study of the region immediately surrounding that particular schoolhouse. The little hill back of the schoolhouse, the creek that flows through the adjoining field, the puddles of water that collect during a rainstorm, and the very soil of the playground as well as that of the surrounding fields; these are the things that she is to teach as types of what is to be found the world over; and not the Alps, the Amazon River, the Mediterranean Sea, or the Loess of the Mississippi Valley. First of all, then, *teach what can be seen, handled, or made in any legitimate way to serve as a basis for future development.*

It is not the purpose of this Bulletin to find fault with the subject matter or the arrangement and treatment of the same in the California State Series Introductory Geography. No writer ever hopes to write a text-book that will serve all possible needs on any other subject, much less does he hope to be able to write a complete treatise on home geography and at the same time confine it to a few short pages. The aim is to point out the fact that the book as it stands is not suited to all possible needs, and to try to show how this can be made to fit the California school much better by a process of judicious pruning and engrafting. That is, if you see that your class does not need all that is given in a particular part, drop out what is not needed; or if another part seems to be wanting in

some particular, add the things that are needed to adapt it to the neighborhood and to complete the foundation so it will be the best possible for future development. Care should be taken to develop the subject in such a way that the pupils will connect one part with the other and thus get a general picture of the whole.

What follows is an attempt to adjust this part of the Introductory Geography to fit one locality at least and in that way it will be easier for the teacher in each locality to apply it directly to the problems at hand. All of it will apply directly to a great many districts and the greater part will apply to all of them. Thus all that is left for the teacher is to alter it in a few places and let the remainder stand. The outline of each section in the text-book is given here in the form of marginal topics. These are mainly for the guidance of the teacher in giving the subject so that she may see the relation of the questions to the material in the text-book.

A few simple cuts have been introduced from time to time so that the teacher may see the use of making rough sketches on the blackboard. These cuts are all from photographs of actual blackboard drawings. They are not intended as works of art, but are intentionally simple so as to encourage the teacher who has had little or no training in art work. What is desired is to present the main ideas and leave out of consideration the mass of detail that would only serve to confuse and detract from the main points. Any teacher can produce a blackboard drawing that will be far better than a word description of the same thing.

The teacher who can produce a drawing and at the same time explain it to the class is not only doing an excellent bit of teaching but is also economizing time in at least three ways, viz: (1) a picture or drawing presents an idea in much less time and in a clearer manner than a word description; (2) the ideas are developed as the picture is being produced, thus rendering the image more complete and consequently more lasting; (3) it saves the time that would be used in drawing the picture beforehand.

The teacher will find on pages 63 to 80 a systematic review consisting of the points that should be so well taught and reviewed that the class will remember them after they have passed beyond these grades or even into the life outside of the school. These points are the ones that have been given each day and are so arranged that they can be easily handled by the teacher. By recasting the associations they can be made to present an ever changing aspect with the same final result. The method of handling this review is given on page 63.

I. SOILS. (Three days.)

To teach this section properly it will be necessary to have the following materials at hand for use as the lesson progresses. The teacher can save herself work and at the same time awaken the interest of the children in the subject by asking them to bring these materials. For example, one

will bring a piece of glass, another a cupful of sand, etc. Let them do for themselves and see how happy and interested they become.

A small vessel of dirt from the school yard.
A piece of glass. (Broken window glass will do.)
A common pin.
A small amount of sand. It is best if it contains some white sand.
A few bright nails and some rusty ones.
Several pieces of ordinary stone. (Those common to the region.)
A piece of decayed wood, and a piece of the same kind of wood that is not decayed.

Place these materials on a table or box so they can be easily found as needed. In questioning a class where experiments are being used as a means of instruction it is best to state the question before calling on any individual, as it is more apt to keep the mischiefmaker on the alert for fear that he may be called upon. Even if there is no danger of this sort of thing, it will be found that interest will be keener if there is a little room for conjecture as to whose turn it will be next. The addition of names to the questions must of course be left to the teacher, so the following contains no names of this sort. Proceed with the lesson according to the following plan:

1. Materials needed for this lesson:

The small vessel of dirt from the school yard.
A common pin.
A piece of glass.
Some common rock powdered up.

General aim.—To teach soils, and their origin and characteristics, and show the dependence of life upon these soils. (One day.)

Lesson aim.—To learn what soil is and what its source is.

METHOD OF PROCEDURE.

Soil.—How many have ever played in the dirt? Have any of you ever heard your fathers call it by another name? (If not, state that some people call it soil.) Could you call the dirt in the school yard soil?

Source of soil.—Did you ever try to think how soil is made? Here is some soil that came from the school yard. Rub some of this soil between your forefinger and your thumb. How does it feel? The gritty feeling is caused by the little particles of soil rubbing against each other. I will now rub some of this dirt over a piece of window glass. Do you hear anything peculiar? What do you think it is? Look at the glass. What do you see? (Point out any scratches that may be present if they are unable to see them for themselves.) Try to scratch the glass with this pin. Does it make a mark? Are the particles of the soil harder or softer than a pin? Than the glass? Look at the sand carefully. What does it look like? Here is some rock that I have pounded up quite fine. Look at it. What do you see? How is sand made? Look at this soil. What

do you see? Does it look like sand? Does it look like the rock I pounded up? Where does sand come from? Where does the soil come from? Of what is dirt made?

Conclusion.—To-day we have learned that soil and dirt are names for the same thing and that it contains small sharp-pointed particles that are harder than glass.

Problem.—Next time we are going to see how different things help to break up the rocks of the earth's surface and make them into soils.

2. Materials needed for this lesson:

Two pieces of common rock.
A piece of solid wood and a piece of decayed wood.
Some rusty nails and some bright ones.
A piece of porous rock.

Aim.—To teach some of the means by which soils are formed and show that all soils have solid rock beneath them.

(Give brief review of the principal points of last lesson.)

Formation of soils.—Let us see what happens when we rub these two rocks together. What is formed? Does it look like sand? Does it look like soil? Streams in rolling rocks down their beds rub them together in much the same way. Here is a piece of pine. (Or any other wood. Hold up a piece that is sound.) Here is another piece. (Hold up a rotted piece of the same kind of wood.) What has happened to this one? Here are some nails I found out of doors. Are they the same as these new ones? (Holding up a large picture of a cliff showing broken rock material or having them refer to the picture on page 3. If there is a cliff within reach of the schoolhouse have them visit it and learn these things from it.) Notice the rock in this picture. (Or cliff.) Do you see any evidence of decay? What is it? Notice the cracks? What caused them? What happens when water freezes in a pitcher or water pipe? (A piece of porous rock.) If these holes in this rock were filled with water and the water frozen what would happen? That is what often happens. (If the picture is obtainable the following may be used, otherwise it must be omitted or changed. If there is an example of such a thing within reach use it instead of the picture.)

Plants and earthworms.—Here is a picture showing how the roots of a plant have pried off a large piece of rock. See how decayed it looks. Have you ever noticed little piles of dirt, about a thimbleful, on top of the ground just after a rain? What caused them to be there? In what ways are rocks broken?

Soil mantle.—Look at the picture on page 5 of the State Series Introductory Geography. (Visit such a place if possible.) What is on the surface of the earth near the pond? Why does it grow there? Where do you see the smallest rock particles? Where do you see the solid rock? What can you say of the size of the rocks as you go down from the surface? Why is soil deeper in some places than in others? If we were to

dig deep enough out in the yard what would we find? (They may say water, but this may be found before they get to solid rock.) Did you ever see the men dig a well? Did they strike solid rock? To-morrow we will see how soils are useful to man and all other living things.

3. **Aim.**—To show how soils are useful to plants, animals and consequently to man. (One day.)

Review previous Lesson.

Uses of soils.—(Refer to any rocks in the neighborhood and proceed.) Did you ever see grass growing on a smooth rock? Why do we need grass? Why do you eat? What does a plant eat? (Answer it if they are unable to do so.) What else besides plant food is needed by the plants? Is there any plant food in this rock you have broken? Let us answer this question by planting some beans in it and watching to see if they will grow. We will have to give them a little water from time to time. Do dogs and horses eat the same thing? Do birds eat the same things that dogs and horses do? Do you? Do you think that all plants eat the same thing? Since they do not we will find different kinds of plants in different kinds of soils. (Have the children bring in as many different colored soils as possible and also the plants or some of the plants that grow in them.) Here are pieces of rocks, I found outside, pounded up fine. (Have as many different kinds of rocks as you can handily.) Do they look alike? What causes the differences in soils? When the leaves fall from the trees, what becomes of them? Where does the decayed material go? It contains certain plant food. Why would you want to put decayed leaves on the garden? What is fertile soil? What is sterile soil? If plant food is taken from fertile soil and none is returned to it, what will finally happen? How could it be made fertile again? Why do people put fertilizers on their lawns?

A review of this chapter may be given, but this will usually not be necessary, for the children will have most of the information already and the first time over will really be a review.

Refs.—Fairbanks, Stories of Mother Earth; The rock floor, pp. 17–21; How soil is formed, pp. 23–29; A handful of sand, pp. 31–36.

II. HILLS. (Two days.)

If the school is located, as most California schools are, among rolling hills or where there are hills within easy reach of the school, it is safe to assume that the pupils are quite familier with the greater part if not all of the subject matter of this section. Even in those districts free from elevations and slopes (of which there are exceedingly few) of any great degree the children may have seen hills and have walked and run over them enough to know a great deal about them. If so, much of the work of the first time over will be a review.

Time is valuable.—Give enough but not too much time to drill. There should be enough time spent upon a certain portion so they will retain it till the next review is given.

Materials.—Large shallow dish of some sort, a piece of 6-inch board (or wider if the dish will permit) about a foot long, some dirt from the yard, a sprinkling pot of water, or oyster can with small holes in the bottom and a dipper of water.

This lesson can be given during a rainstorm, or just after it, to the best advantage, or, if the teacher has a garden hose with sprinkling nozzle and a convenient faucet to which it may be attached, the playground where there is no grass may be sprinkled to represent a rainstorm. Ask the questions while the children are watching the rainstorm (either real or artificial). If neither of these is available, put some dirt on the 6-inch board, pat it down in such a way that it is somewhat irregular on the surface, let one end rest in the shallow dish in such a way that it slopes gently.

Formation or origin of hills.—What have I on this board? What other name did we learn for it in the last chapter? What did we find beneath all soil? (Sprinkle the dirt lightly.) What happens when I sprinkle this soil lightly with water? Since this soil is from the yard, do you think that the rain would act the same way? How far could the water soak into the ground? What does the board represent? (Rock.) (Sprinkle heavily by pouring water into the can and letting it sprinkle over the dirt on the board.) (Sprinkle heavily enough that the water collects in puddles and some of it runs down into the pan. Make a little streamlet of it if possible.) What happens when it rains hard? Does all of the water run off? Is the water clean after it reaches the pan? What makes it muddy? If you had a number of little streams like this one and could run them all together what would it form? (Brook or creek.) Would it carry much mud during a rainstorm? Is this soil level? Is the school yard level? How do you know? Does this resemble the school yard during a rain? Does it resemble the field yonder? Then if heavy rains were to fall on those fields for a great many years what would happen? What do you call the places from which the water runs quickly? (Ridges.) What is this between these ridges? If these ridges were large like the one out in the field, what would you call them? How are hills formed? (They should be able to reason this out from what has been done and from reading the text.) (Ask questions in text referring to height and length of hill. See Figue 10 in State Series Introductory Geography.) (Omit section on temperature of hill.)

Homes.—Would you rather live on low ground or on a hill? Why? What is a swamp? Would you like to live in a swamp? If you had to live in a low place, how could you keep it dry? If you were standing on the school ground could you see as far as you could if you were up in the top of that tree? Why did people build castles on hill tops? Is it easier to walk on the level ground or on a hillside? What other reason is there? Why do people like to live on hills at the present time?

III. MOUNTAINS. (Six days.)

BEGIN YOUR DAILY REVIEWS. See pages 63 to 80.

The work of this section is based upon the study of the hill so far as feasible. Consequently, a part of it will be merely an expansion and broadening of what has been given in the last chapter; the remainder will be new material and must be developed as such. Of course the same things apply here as before in regard to parts already familiar to the members of the class.

The work may be given at any time if there are mountains near the school or that may be easily seen from the schoolhouse. Otherwise it is best to begin it at a time when there are cloud banks in the sky so that the various features in the clouds that resemble mountains may be pointed out as suggested in the first paragraph. It is advisable to have pictures of mountains to refer to and also the model of figure 17 as suggested in the text. A picture will show not only the relative size of a mountain but also many of the characteristic features.

Similar to hills.—How many of you have ever seen a hill? Where did you see it? What did it look like? How many have seen a mountain? Is it like a hill? If a hill were to grow would it be a mountain after a while? If we call the hill a kitten then the mountain will be the old cat. What does that mean? Are the cat and the kitten alike? How? How do they differ? Are the mountain and the hill alike? How? How do they differ? Let us not answer this just now but a little later. Look at the mountain yonder. (Or the cloud bank, or the picture. If the latter is used, call attention to the size of the mountain as compared to the size of some common object in the picture.) Do you see that point sticking up higher than the rest of the mountain? What is it called? Can you see other peaks? Did the hill have peaks? Notice those deep cuts in the sides of the mountain. Are there any in the sides of a hill? Are they as large? How do you account for the difference?

Size of mountains.—How long does it take to walk to the summit of a hill? Of the mountain? Which is the higher? Would it be as easy to climb a mountain as to climb a hill? Give two reasons why. Which is warmer, a mountain or a hill? Why? What is a mountain chain or range? Point one out. (The crest of the cloud or the summit of the mountain will serve, but better still will be the clay model of the mountain range.) If a mountain were very large would it be easy to climb it? Why? If it were steep how would you get up most easily? What is a cliff? (See Fig. 18, page 21, State Series Introductory Geography.) How will we get over the cliff when we climb the mountain? If we were to climb the mountain in a storm, where would we be in rain? Where in snow? Why? Where do trees grow on mountains?

Mountain climb.—Let us go on an imaginary journey to the top of Mount Shasta. (Or any mountain that is near.) What time will we leave the foot of the mountain? Why? What do we take with us? Why? What are the guides for? Describe the scenery we see first.

What is the *"timber line"*? How do the plants differ from now on? What is the *"snow line"*? What do we see below and beyond us? (If the teacher has pictures of these parts it will add greatly to the interest and to the value of the lesson. If nothing better is at hand refer to Fig. 19, State Series Introductory Geography. Point out the main features in the picture so that they will be sure to get the value of them.) Why does the guide go ahead from now on? What is an avalanche? Why are we interested in them? What do you see when you reach the summit? How do you feel? Do you note any plants or animals? (It may be interesting to know that butterflies have been seen on top of Mount Shasta in the summer time.) Is it always difficult to climb mountains? Why?

Why do people build houses and hotels in beautiful mountain spots?

Wealth of mountains.—Name some metals. (Have a few specimens of metals such as iron, copper and lead. Call attention to their being heavy and their differences of color and appearance.) Where are they found? What are ores? (A few specimens of ores, such as gold, silver, iron, copper and lead should be at hand. It will be advisable to have ores of the metals shown in the above case. The ores can usually be obtained from the State Mining Bureau or cost but little if purchased from a dealer. The Chico Normal Extension Department has samples of various ores and minerals that will be sent out upon request for use in this work. The school getting the same will be expected to pay parcels post charges both ways and will be permitted to keep them as long as they are needed in the work. Usually thirty days or less will be considered time enough, but this may be extended as found desirable.) What are some of the metals used for? Why do people sometimes lock up their jewelry? Why do men protect the trees in the forests? Name some of the valuable trees of California. Do these grow on the mountains near here? What are trees used for? What other things do mountains furnish? What is the water used for? Of what use are the ice and snow on the mountains? What would happen to the streams if there were no ice and snow to melt? Where does all of the water go? (This question will be answered in a later chapter.)

IV. VALLEYS. (Five days.)

CONTINUE THE DAILY REVIEWS. See pages 63 to 80.

This subject must be connected with the last three sections so as to show the general relationship that exists between mountains, hills, soil formation and valleys. Later it will be necessary to include all four of these in a sort of an introduction to the chapters so as to be sure that the pupils see the connection and realize that it has all been about nearly the same part of the earth's surface.

Sand, clay or modeling of some other sort will be found almost indispensible to securing an easy understanding and a firm grasp of the meaning of this physiographic form, the valley. The accuracy of the model is desirable but not absolutely necessary to insure success.

Erosion valleys.—What happened when the rain fell upon the school yard? What did the streams carry with them? Did the streams take more dirt or soil from one place than from another? What was formed where the least soil was washed away? Is it higher or lower between hills? What are these low places called? Do all streams form valleys? How? When does this action of the streams cease? Did you ever see a valley? What did it look like? Are there any valleys in your neighborhood? Do you live in one? (For the next paragraph let them answer the questions at the bottom of page 30 and those at the top of page 31 of the State Series Introductory Geography.) Are all valleys the same size? How many slopes does it take to form a valley? (Model, in clay or otherwise, figure 26 and have them recite while looking at the model. If it is modeled in putty, papier-mâché, or plaster paris it may be kept and used year after year and will serve instead of figure 45 or 46.) Point to them on the model. Is it easier to run up hill or down hill? Which way does the water run? Why? Which way is down the valley? (If they have any difficulty in determining, state to them which way the water runs.) Which is the length of the valley? Which is its width? Which distance is the greater? Is this schoolhouse in a valley? What is this valley called? Which way is down this valley?

Divide.—What is a divide? Point it out on the model. What part of the house is the same as the divide? Why is the crest of the ridge called a divide? Is the divide on the earth all in a straight line like the one on the house? Why? Do you see any reason for its being so crooked? (On account of the creeks or headwaters of the streams carrying soil from different places along either side of the divide.) Is the divide always sharp like the roof of the house? How else may it be? Point out a flat divide on the model. Measure the width of this valley on the model. (Point to one and then watch to see that it is measured correctly.) Has it been done correctly? (If it has not call on others to do so correctly.) Measure it in another place. Is it the same at all points?

Folded valleys.—Are valleys all the same size? (Mention the Sacramento-San Joaquin instead of the Mississippi River. It is nearer home.) What kinds of slopes have large valleys? Small ones? In what part of the valley does the stream flow? What is a plain? Do we usually have plains in small valleys? Were large valleys formed in the same way that small ones were? (The process may be illustrated by bending a piece of paper.) How is each formed? The Sacramento Valley is due to folding. Is the Sacramento Valley just the same now as it was a thousand years ago? Why? What has become of the dirt that has been washed away from the valley in the places along the foothills?

Homes.—Where do people usually build their homes? Why? Do they usually live on the sides of high mountains? Where do they live then? Give two reasons why people may not want to live on hills. Why do they live in the valleys? What else do we find in the valleys? Are all valleys level? Is the school yard level? Is it a swamp or a hill top?

Drainage.—If the valley were all level what would become of the water after a rainstorm? If there are slopes, what happens? What would happen if the grain field yonder were perfectly flat and we had a heavy rain? What would be the effect if the water did not drain away from the schoolhouse? From your home? How do the farmers sometimes aid the natural drainage? What is a swamp? What is the effect of draining a swamp? What kind of land is there in a swamp? Then why do men drain them in many cases?

Roads.—Where do people usually build their roads? Where are the mountain roads usually located? What is a *"mountain pass"*? How do they go down the other side of the mountain? Where would you build a road over this mountain? (Point out a mountain on the model.) Why do roads follow the valleys even in a hilly country? Why do roads follow the streams? Does the road on which you come to school follow a valley? Does it follow a stream? Why is it easier to build a road on a plain than among the hills? How do railroads get over the mountains? Mark a line for a railroad over this mountain. (Point to a part of the model.) Why is the railroad track made as nearly level as possible when it passes through a valley? Have you ever ridden in an automobile? Why have automobiles made us prepare better roads?

Scenery.—Where do we find beautiful scenery? Is there any beautiful scenery near here? Where? What is it? Does any one know of another place? Can you see some pretty scenery from the school window? What is it? What are autumn leaves? When do they come? There is much beauty in the world round about us if we would only take the time to see it. Could you imagine a more beautiful sight than a field of tall grain waving in the breeze?

V. RIVERS. (Six days.)

DO NOT FORGET THE DAILY REVIEW. See pages 63 to 80.

The simplest way to introduce this subject is by means of the little creek that flows by or near the schoolhouse. It may be dry during the greater part of the year, but even then it is better than a picture of a river. The pupils have seen it during wet weather, or if the subject comes in at the right time the stream may be full of water just when you need it. Going from your own stream to any other will be an easy matter. Many of the terms such as banks, falls and the like will be already familiar to them and will need no drill. All that is needed is to assure them that the parts of the stream that they know are the same as the ones the book tells of.

HOME GEOGRAPHY SHOULD BE A REALITY. MAKE IT SO.

A clay model of one of the figures in the text (either 45 or 46) will be very useful. The river can be made more realistic by sprinkling water over the model and watching it collect to form the river system.

Emphasize especially the relation of the river and its processes to the people who live along it or in its valley.

Source.—What happens when a light rain falls on the school yard? A heavy rain? How does the water run off? After the water leaves the school yard where does it go? Is the creek or brook the same width at all places? Are there any deep holes? Where? Is it deep all the way? Where is it shallow? What are rapids? Are there any near here? Do they look like figure 37 in the text? Are there any waterfalls? They may be smaller than those in figure 38 in the text. Are they? (All of the above should be asked about the creek that flows near the schoolhouse if such a creek exists.) Where does the water in the creek go? What is the chief difference between a creek or brook and a river? What is the source of a river? How large are most rivers at their sources? (Refer to the river in your own neighborhood if there be one. Otherwise use pictures such as Figs. 37–44 in Introductory Geography.) Are they the same size farther down? Why?

Mouth of river.—Along what part of a river do we find cliffs? What happened when we rubbed two rocks together? (Repeat if necessary.) What happens when I strike these two rocks together? (Have two sharp cornered rocks to illustrate with.) What is the effect when a torrent dashes one rock against another? What will be the result if they are dashed along for several miles? What is finally formed from the rock material? If we were to follow down the stream what changes would we note in the size of the river? What are tributaries? What is the stream bed? How does the slope change as you go down the river? What do you notice on both sides of the river after you have passed out onto the plains? How large are the particles carried by the stream here? How will we cross the river here? Why not wade across? What do we see on the river at this point? What are these boats for? Where does the river lead to? What is the *"mouth of the river"*? What kind of material does it carry near its mouth? What finally becomes of the sediment? Compare the size of the river at its source with its size at its mouth.

Water supply.—Where does the water come from? What happens to small streams and to some large ones after a rain? What keeps large rivers from drying up during the summer? Give another possible reason. Does all of the rain water run off immediately? Where does it go? How do you know there is water in the ground? What is a spring? What is a flood? Why are people on low ground anxious about high water? How do they sometimes protect themselves?

Flood plains.—We noted that when water was poured on soil some of the soil was washed away. Where did it go? Where does the soil go that is washed away from the yard by the rain? Put some muddy water into a glass and let it stand a while. What happens to the sediment? How does this help to explain what becomes of the soil removed by the rain? What is a flood-plain? Describe it by telling how it is made.

Deltas.—If the stream flows quite swiftly till it reaches a lake or the ocean what becomes of the sediment? Why is it deposited here? What is formed at first? What is finally formed? What is a delta? What is the shape of the surface of a delta? Why? How does the delta grow?

(Refer to Fig. 45, State Series Introductory Geography, or a model of it when talking of deltas.)

River system.—Describe a river system. (Name some local river to be described.) What is a river basin? Point one out on the model. How does a river basin differ from a true basin? If it were a true basin what would it be? (A lake.)

Water supply and drainage.—In what way is the Sacramento (or any other river) useful? In what other ways is it useful? How do plants near the river and those away from it differ in hot weather? What is irrigation? How is it accomplished? Are there any irrigation ditches near here? What is another use for the water of a river? How else are rivers important to the land through which they flow? To our city?

Power.—If a stream flows swiftly how may it be useful? How is this accomplished? (A small water wheel may be put into the stream near the schoolhouse to show this, or make a water wheel, attach it to a v-shaped trough in such a way that it will run when water is poured into the trough. Tilt the trough at different angles and note the result.) For what is it used? What is "water power"? What are factories? Where is water power found? Why are cities often located at a fall in a river?

Navigation.—Name one other way in which rivers are valuable. Why are boats used on a river? Why is it easier to carry goods along a river than overland? Which is cheaper? One horse could haul about forty times as much on a boat as on land. What kinds of rivers are best for boats? Why do farmers prefer to live near a road, railroad or large river? Why are many cities on large rivers? Name some.

VI. PONDS AND LAKES. (Four days.)

Review as before. See pages 63 to 80.

A great many schools will be so situated that there will be ponds and lakes within easy reach, at least during the rainy season. Have the children study these as they find them. If it is impossible to take excursions during school time you can at least set tasks for them to perform at recess, after, or before school, such as looking for the various physical features. A puddle of water in the school yard or a clay model filled with water in the school room will help to give ideas about lakes, but pictures will be needed to give an idea of the actual size of them. Have them learn the features from the model, then write the names of these features on slips of paper, fasten these slips to sharpened sticks, and send the children (part or all at a time as the teacher may think best) to the pond, where they can stick the labels to indicate the different features about which they have been studying. Later the teacher can visit the pond and see if the labels are properly placed. If all are not correct, replace them in their proper location and send the class to see them again. This will help to correct any errors they may have drifted into.

Origin.—What are the uses of rivers? Where does the water come from? When are the rivers the highest? When the lowest? How do men sometimes save the water for summer use? What is a pond? (Call attention to the puddle in the yard.) When do ponds fill up? When are they nearly dry? If a river flows through one what effect will it have on the time when the pond will dry up? What is a lake? How is it formed? What is the difference between a pond and a lake? Name other ways in which lakes are formed? (Have a clay model of a lake with all of the features to be taught represented on it.) What is an inlet? Point to one on the model. What is an outlet? Point to it. What is sediment? How is it carried from one place to another? When a stream flows into a lake, what becomes of the sediment? If this continues for many years, what is formed? What is a delta? What happens if the delta continues to grow for a long time? What is formed? What is the head of the lake? The foot of the lake? (Evaporate some water and show the white substance left, or better still have an old teakettle or some of the coating from the inside of it. The water may be evaporated in a glass beaker while the class is reciting. Put some salt into some water and heat the water. Hold a cold clean dish of some sort over it so as to collect a few drops of the steam. Cool the water in the dish. Show the first dish.) All water contains this white substance. Some of it is common table salt. (Hand the dish, on which the vapor has collected, to one of the pupils.) Taste the few drops of vapor that are on this dish. Are they salty? Taste this water. Is it salty? What happened? (The water evaporated and left the salt in the dish.) This is what takes place when the sun shines on the lakes and ponds, but of course the water does not get so hot. If no water flows out of a lake, why does the lake become salty? What two kinds of lakes are there?

Shore line.—What is the shore line of a lake? Point to it and trace it out. What is a beach? How is it different from any other part of the shore line? Is there one on this model? Where? What is a headland? Point to one. Point to a cape. A peninsula. A bay. A strait. What is a harbor? Can you locate one? Is there one in California? Where? Point to an island. Is there one near here?

Uses.—In what ways are lakes used the same as rivers? What are waterways? Why have people settled on lakes? Why have they built cities there?

Harbors.—How are wagons loaded with wheat (or fruit, or any local product)? How are railway cars loaded? Could ships be loaded in the same way? Why? What will we need to be able to load a ship? What is a wharf? How will you load a ship that is moored to a wharf? What is a breakwater? For what is it used?

VII. THE OCEAN. (Two days.)

This subject is somewhat removed from the average pupil in the California schools and consequently for such its explanation depends almost wholly upon their reasoning powers and the use of pictures. *Consequently it is best treated rather briefly and left for more detailed treatment when they are better able to understand it later on.* Then the globe can be brought into use and an idea of the relation of the land masses to the ocean as well as the relative size of each can be developed. Schools near the ocean can put more time on it and do so very profitably. Pictures will supply much of the material needed for a profitable study of this section. These pictures should include a picture of a storm at sea, a picture of the shore and one of ships so as to get an idea of the vastness of the ocean. Figures 57, 58, 59, 60 and 61 of the State Series Introductory Geography will be found valuable for this work.

Extent.—If we are to start from the schoolhouse and follow the little rills that form during a heavy rainstorm till they reach a lake or some large body of water, what change would we note in the size of the stream? There are hundreds and thousands of such streams. Can you imagine how much water is carried by them in a year? If it all flowed into a pond and none flowed out, what would happen to the pond? (It would become a lake.) If it then continued to flow into a lake what would happen to the lake? (It would become an ocean.) Can you imagine a body of water thousands of times as large as a lake? How large is the ocean? (These answers will merely serve to show how well the class has imaged the subject.) No water ever runs out of the ocean but some of it evaporates. Is the ocean fresh or salt?

Waterway.—What is a waterway? How can the ocean be used as a waterway? Are the ships large or small? Why? In what ways is the ocean like a lake? What is a harbor? How are harbors useful to ships? Why are cities located on harbors? What is California's best harbor? (San Francisco Bay.) Can you see why the city of San Francisco is located on this harbor?

Other Uses.—Why do people go to the seashore in the summer time? What do people do at summer resorts? How else is the ocean useful to man? Why do we need rain? Where does it go when it strikes the earth?

Scenery.—Why do people build parks? What do they have in parks? What are the creeks and lakes for? All about us we find beautiful things that nature has made for us. Are there any near here? (Pictures, if properly used here, will aid greatly in giving an idea of the beauty of different places over the earth's surface and especially in the different parts of California.)

VIII. THE AIR. (Five days.)

REVIEW CONTINUOUSLY. See pages 63 to 80.

This subject is one that should have a wide interest. It is favored in that it can be studied as well at one place as at another. Of course so far as storms and the precipitation of moisture are concerned it can best be undertaken while storms are in progress, but usually the experiences of the children will be broad enough that the teacher may draw on them quite freely. The greater part of it will, therefore, be familiar to them and the first time over will really be a review and also a sort of an organization of the experiences they already possess. Instead of using the time for drill it would seem advisable to use some of it at least for the work suggested at the end of the chapter, *i. e.,* an elementary study of weather maps.

Materials.—Small empty bottle, vessel of water, paper windmill (see Appendix), candle, touch paper (see Appendix), piece of wood, piece of iron, glass of water and small piece of ice.

Occupies space.—Perform the experiments and ask the questions indicated in the fine print on page 77 of State Series Introductory Geography. Why does not the bottle fill with water when pushed down into the water mouth first? What is air used for? What is wind? Wet your finger, then blow on it or hold it in the wind. How does it feel? This is one way to show that the wind is blowing.

Winds.—What is the atmosphere? Where is it found? How far does it reach up from the earth? What is a breeze? What is a wind? The air is never quiet. How can you show this? (The clouds high up in the sky are always moving.) Put this windmill (paper windmill) out of the window where the wind strikes it. What happens? Blow against it. What happens? What makes it turn? (Place a lighted candle on the table where all can see it and hold the paper windmill over it. It begins to turn.) What does that mean? (The air is moving upward. Light a piece of *touch paper* and hold it above the candle.) What does this show? (Hold it a little to one side and a little below the level of the flame.) What does this show? (Hold it a little farther away.) Where does the air come from to take its place? Hold your hand over the candle. (The pupils must either be allowed to walk up to the desk or the candle may be passed back to the pupil.) What do you find? What causes the air to rise? What causes it to come in from other places? What causes air to move? (Hold the windmill over the stove. If there is no stove or radiator or if there is no fire in the stove or heat in the radiator this must be omitted.) What does that mean? What happens when air is heated? If you put a piece of iron into water what happens? (Perform this experiment if it is deemed necessary.) If I put a piece of wood into water what happens? Can you explain why one sinks and the other rises? Why does warm air rise? What took place around the candle? What causes winds? If it is cold to the east of here and warm to the west of us what kind of winds will we have? Explain what happens.

Uses.—Did you ever try to walk against a strong wind? With it? Which was easier? Why? How can this force be used? Another use? (See figure 67, State Series Introductory Geography, for the answer.) If you hang a wet cloth out in the sun what happens? If you boil water on the stove what happens? Where does the steam go? If you set a dish of water in the sun for a few days, what happens? Where does the water go? Why don't you see it in the air? How can you show that it is there? (If they are unable to suggest it, refer them to figure 70 of the State Series Introductory Geography.) What has happened? Where did the water come from? What happens when the sun shines on the ocean? What do the winds do with this moisture? How else do you know that there is moisture in the air? Why could you call winds water bearers? What is a desert? Would you like to live there? Why?

Condensation.—What made the drops of water collect on the glass of ice water? What happens when vapor is condensed? If air is cooled what happens to the moisture in it? In what ways may it be cooled? How do mountains aid in cooling it? How are thunder storms caused?

Forms of vapor.—Did you ever notice your breath on a frosty morning? What caused it? What is a fog? Did you ever see a fog? What are clouds? What did they look like? How are they formed? What is rain? How are the drops formed? Does it ever rain on a clear day? Where does the rain come from? Why do the drops fall to the ground? If the air strikes cold leaves, what often happens? If the air is cooled below the freezing point before the vapor is deposited, what is it called? What is the difference between frost and dew? Between rain and dew? What is snow? How is it formed? What is the difference between rain and snow? Of what use are dust particles in the formation of rain and snow? If it rains on top of the mountain does it snow in the valley below? Why? If it snows on the mountains does it snow in the valley? If it rains in the valley may it snow on the mountain? Why? Why do winds from the ocean sometimes bring rain? Why do those from the land seldom bring rain? What is a weather record? For what can it be used?

(For elementary study of weather maps see Appendix.)

IX. INDUSTRY AND COMMERCE. (Five days.)

The greater part of the subjects of commerce and industry is better considered several grades later, but the meanings and reasons for the existence of each can be given by applying it to the local community. Trade on a broad basis can not be understood until the pupils are far enough along that they realize that all other countries are unlike their own in a great many ways. This means that it should come well toward the end of the grammar school curriculum. A great deal of it will be gotten as they go on through the geography course.

What kind of work does your father do? (Ask several.) Why does he work? Do all men work? Why should all men work at some kind of industry? What other kinds of work are done in this neighborhood?

(Have them name several.) What is a storekeeper? What does he do? Where does he get his goods? Who buys them? Could you buy a dress at the store? A pencil? A dipper? Were stores always as they are now? How do people up in the mountains where there are no stores get dresses? Pencils? Sugar? Do they come to the store every day? Why? Where did people get their clothing a hundred years ago? Why didn't they go to the store? Why did they settle along the coast at first? How was the land away from the coast settled? Where did they get their goods at first? Later? Tell about Abraham Lincoln. Where did the early settlers get wheat? Their clothing? Where did they get sugar? Gun powder? How did they get to the store? Did they go often? Why? What did they usually take to the store? What did they bring back? What did they call this? What happened after a number of families had settled near each other? Where did the farmers trade then? How is this changed now? How have the stores changed? Make a list of the different things men do in this neighborhood, for a living. Make a good definition of "commerce" by using what we have learned thus far about trading. These various things that men do to earn a living are usually spoken of as "industries."

If we raise more fruit (or any other local product) than we need, what is done with the amount not needed? In what ways may it be shipped from here? If you were going to ship some of it to some people in the mountains where there are no roads, how would you send it? What is a pack train? Where are wagons used for shipping goods? How may you ship your fruit if you live on the bank of a river? If you live near the railroad? What is the difference between commerce and industry? How are roads used in commerce? Are things shipped over roads more cheaply than over places having no roads? Why? Why are good roads better than poor ones? What is a good road? How can one be made? Does it really cost more than a poor road?

X. GOVERNMENT. (Two days.)

YOU SHOULD REVIEW A FEW MINUTES EACH DAY. See pages 63 to 80.

This chapter seems to be beyond the reach of children of ten or eleven and consequently is better left till these things are taken up in a regular course in civics. A few little ideas may be given here, such as the need for government and the chief reasons for centralizing government. Those parts which are little understood by many grown-ups and consequently beyond pupils of the fifth or sixth grade are better avoided entirely. Otherwise it will be at best but an attempt at the subject and will in many cases result in a muddle of details. This does not mean that the subject of geography is to be slighted on this account, but on the contrary something will be suggested later to take the place of the part left out.

Home.—When you go home to-night will you go to the pantry and eat all of the jam? Why? Will you eat all of the fruit cake you want? Why? Will your brother do so? Why? Will your sister? Why?

What would happen if you were allowed to do as you pleased in your home? Suppose your sister and brother did as they pleased also. What kind of a home would you have? Would you like a home where you would not be able to have any playthings of your own? Would you all be happy? Then why do your mother and father have to make you do certain things in the home? Is it necessary to have some sort of a government in order that you be happy?

School.—Can you sit where you please in the school? Can you eat apples in school if the teacher sees you? Why not do these things? If you all went out to play when you pleased what kind of a school would we have? Is there any need of government in the school? What is a rule? What is it for?

State.—Can I take your hat whenever I want to? Why? Can you take my cape and keep it? Why? Can some one take your lunch every day and eat it? Why? If we did all of these things, would we be happy? Can I go to town and haul away a load of lumber and not pay for it? Why? Why do we need government in the State? What do we call the rules?

Nation.—If I were to go to Nevada and drive some cattle to California and sell them what would happen? Why? Could you go to Oregon and haul away a carload of apples? Why? What would happen if you did? Why? Do we need a larger government than the state? Why? What are its rules called? Who sees that the rules are enforced in the home? Who sees to that in the school? In the State? In the United States? Who chooses the ruler in your home? In the school? In the State? In the United States? Does each ruler have a definite home? Why? What is the ruler of the home called? Of the school? Of the State? Of the United States? (If they do not know some of these state the names for them.)

XI. MAPS.

The preliminary work of this topic has been treated in Chico State Normal Bulletin No. V, pp. 12–13. If the class is not already familiar with the work it will be best to turn to that Bulletin and drill upon the work given there until it is well in hand. Then take up the work as indicated below.

What are maps for? For what are they used? Could you draw a map of the top of your desk? Of the school yard? Of the whole valley? Could each of these be drawn on a small piece of paper? How? What is drawing to scale? If I have a board forty feet long and want to draw it to scale on a piece of paper six inches square, what scale shall I use? (If it is found necessary, drill them with similar questions till they are familiar with the meaning of a scale.) Turn to page 110. Measure the top of the map (figure 87). How long is it in inches? How many feet is that? How long should it be? Measure the right side. How long is

NOTE.—Where reference is made to pages or figures in what follows it is to be understood that it is to the State Series Introductory Geography.

that? How many feet? How long is the teacher's desk? How wide? How large is the piano? How large are the desks? How wide are the doors? How far from the wall on the left to the first row of seats? Draw a map of our schoolhouse. (Aid them in the selection of a simple scale. Follow the directions given in the text.) Draw a map of the school yard according to the directions given on page 110. Draw the third map as indicated on pages 110 and 111. (The second and third maps may be done when convenient or left out entirely if thought advisable.) How are maps sometimes used? What is a compass? (Show one to the class.) For what is it used? In what direction does it point? (Show that it does so.) What is the North Star? (Tell just how it may be located. See Appendix.) Where does the sun rise? Where does it set? (Continue with the questions as given in the text, page 112. Then ask the following questions:) Which is the north side of your map? Which is east? West? South? (Follow the directions given in the fine print at the bottom of page 113 of the text and continue with the following:) What is a map? What do maps show? Does your map show the schoolhouse as it is? Why? Does it show the yard as it is? Why? What is not shown? Does any flat map show the region as it really is? What other kinds of maps are there? How do they differ from our maps? What is a relief map? What does it show? We have studied something similar to a relief map. What was it? (A clay model.)

PART II.

THE EARTH AS A WHOLE.

MINIMUM BOOK LIST.

The course as outlined later can be successfully carried on by the use of the following books. However, if the books in the complete list are available they will be found to be valuable. The idea has been to give a list that contains as few books as possible to successfully carry on the course as outlined later:

	Price.
Carpenter, Africa. American Book Co.	$0 60
Carpenter, Asia. American Book Co.	60
Carpenter, Australia. American Book Co.	60
Carpenter, Europe. American Book Co.	60
Carpenter, North America. American Book Co.	60
Carpenter, South America. American Book Co.	60
Coe, Modern Europe. Silver	60
Coe, Our American Neighbors. Silver	60
Fairbanks, Geography of California. Whitaker	75
George, Little Journeys to Hawaii and the Philippines. A. Flanagan	50
George, Little Journeys to Italy, Spain and Portugal. A. Flanagan	50
George, Little Journeys to Scotland and Ireland. A. Flanagan	50
King, Book III. Lee	56
Northern Europe. Ginn	25
Pratt, Stories of England. Educational	60
Smith, Life in Asia. Silver	60
Smith, Our Own County. Silver	50
Toward the Rising Sun. Ginn	25

Discounts are allowed on a number of the above books so that the cost for this course will not be so great as indicated above. In addition to this fact is the one that nine of the above Minimum List are included in the Minimum List for the Journey Geography as given in Bulletin No. V, Part II.

If only the minimum list of books is available the topics marked with an asterisk (*) may be omitted. This will not materially interfere with the course as outlined.

COMPLETE BOOK LIST.

NOTE.—The books marked with an asterisk (*) are the ones included in the Minimum Book List.

The following is a complete list of all of the books referred to in this Bulletin. All are valuable books and should be used if available. Nearly every one of these books will be read by the pupils in the later grades. There are, however, a few exceptions, but it is necessary to refer to these more technical books for a few special topics. The prices and names of the publishers are added so that teacher may, at a glance, know what the cost of any or all of the books used in this course may be. It is hoped that the teacher may from time to time include a few of these books in the order for the library:

	Price.
Allen, Children of the Palm Lands. Educational	$0 50
Allen, Industrial Studies—United States. Ginn	50
Andrews, Each and All. Ginn	50
Andrews, Seven Little Sisters. Ginn	50
Andrews, Ten Boys. Ginn	60
Badlam, Views in Africa. Silver	72

	Price.
Ballop, Footprints of Travel. Ginn	$1 00
Benedict, Stories of Persons and Places in Europe	1 00
Bradish, Stories of Country Life. American Book Co.	40
By Land and Sea. Perry Mason	50
*Carpenter, Africa. American Book Co.	60
*Carpenter, Asia. American Book Co.	60
*Carpenter, Australia and the Islands of the Pacific. American Book Co.	60
*Carpenter, Europe. American Book Co.	60
Carpenter, Foods. American Book Co.	60
*Carpenter, North America. American Book Co.	60
*Carpenter, South America. American Book Co.	60
Carroll, Book II. Silver	48
Carroll, Book III. Silver	48
Chamberlain, North America. Macmillan	55
Chamberlain, How We Are Fed. Macmillan	40
Chamberlain, How We Are Clothed. Macmillan	40
Chamberlain, How We Travel. Macmillan	40
Chase and Clow, Stories of Industry. Educational	1 20
*Coe, Modern Europe. Silver	60
*Coe, Our American Neighbors. Silver	60
Davis, Norway Nights and Russian Days. Fords	1 25
Dodge, A Reader in Physical Geography. Longmans	70
Dryer, Lessons in Physical Geography. American Book Co.	1 20
Fairbanks, Geography of California. Whitaker	75
Fairbanks, Home Geography. Educational	60
Fairbanks, Stories of Mother Earth. Whitaker	50
*George, Little Journeys to Hawaii and the Philippines. Flanagan	50
*George, Little Journeys to Italy, Spain and Portugal. Flanagan	50
George, Little Journeys to China and Japan. Flanagan	50
George, Little Journeys to Holland, Belgium and Denmark. Flanagan	50
George, Little Journeys to Russia. Flanagan	50
George, Little Journeys to France and Switzerland. Flanagan	50
George, Little Journeys to Norway and Sweden. Flanagan	50
*George, Little Journeys to Scotland and Ireland. Flanagan	50
Greater America. Perry Mason	50
Guerber, Story of the English. American Book Co.	65
Guerber, Story of the Greeks. American Book Co.	60
Hale, Stories of the Sea. Little	1 00
Hall, Viking Tales. Rand	35
Herbertson, Europe. Macmillan	75
Herbertson, Central and South America. Macmillan	75
Herbertson, North America. Macmillan	75
Horton, The Frozen North. Heath	40
Jenks, Boys' Book of Exploration. Doubleday	2 00
Johonnot, Geographical Reader. American Book Co.	1 00
Jordan, Matka and Kotik	75
Kennan, Tent Life in Siberia. Putnam	1 25
King, Book II. Lee	72
*King, Book III. Lee	56
King, Book IV. Lee	56
King, Book V. Lee	56
King, Northern Europe. Lee	56
Kipling, Jungle Book	1 25
Kirby, The World by the Fireside. Nelson	1 75
Kirby, Aunt Martha's Corner Cupboard. Flanagan	90
Knapp, Story of the Philippines. Silver	60
Knox, Ceylon and India. Harper	2 00
Knox, China and Japan. Harper	2 00
Knox, Egypt and the Holy Land. Harper	2 00
Knox, Great Britain and Ireland. Harper	2 00
Knox, Northern Europe. Harper	2 00
Knox, Siam and Java. Harper	2 00
Knox, The Land of the Kangaroo. Harper	2 00
Knox, The Levant. Harper	2 00

	Price.
Knox, Russian Empire. Harper	$2 00
Lee, When I Was a Boy in China. Lothrop	60
McClintock, The Philippines. American Book Co.	40
McMaster, Primary History of the United States. American Book Co.	60
Marwick and Smith, South American Republics. Silver	60
Miller, Little People of Asia. Dutton	2 50
Muller, Story of Akimakoo. Flanagan	35
*Northern Europe. Ginn	25
Our Country East. Perry Mason	50
Our Country West. Perry Mason	50
Pratt, China. Educational	40
*Pratt, England. Educational	40
Pratt, Stories of Massachusetts. Educational	60
Pratt, India. Educational	40
Peeps at Many Lands—Ceylon. Macmillan	55
Peeps at Many Lands—France. Macmillan	55
Peeps at Many Lands—Holland. Macmillan	55
Peeps at Many Lands—Ireland. Macmillan	55
Rocheleau, Products of the Soil. Flanagan	50
Rupert, Geographical Reader. Sibley	65
Schwatka, Children of the Cold. Educational	1 25
Seabury, Porto Rico. Silver	50
Sexton, Stories of California. Macmillan	60
Shaler, Story of Our Continent. Ginn	75
Shaw, Big and Little People of Other Lands. American Book Co.	30
*Smith, Life in Asia. Silver	60
*Smith, Our Own Country. Silver	50
Starr, Strange People. Heath	40
Strange Lands Near Home. Ginn	25
The Wide World. Ginn	25
*Toward the Rising Sun. Ginn	25
Under Sunny Skies. Ginn	25
Wade, Our Little African Cousin. Page	60
Wade, Our Little Brown Cousin. Page	60
Wade, Our Little Cuban Cousin. Page	60
Wade, Our Little Eskimo Cousin. Page	60
Wade, Our Little German Cousin. Page	60
Wade, Our Little Hawaiian Cousin. Page	60
Wade, Our Little Italian Cousin. Page	60
Wade, Our Little Japanese Cousin. Page	60
Wade, Our Little Jewish Cousin. Page	60
Wade, Our Little Russian Cousin. Page	60
Wade, Our Little Siamese Cousin. Page	50
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Wade, Our Little Turkish Cousin. Page	50

CONTINUE YOUR DAILY REVIEWS. See pages 63 to 80.

I. **Form and size of the earth.** (Pages 119–121.)

1. The form of the earth. (One day.)

Supplement the text treatment with the following illustrations of the sphericity of the earth:

a. The fact that ships sailing seaward from an observer on the beach disappear gradually, hulls first, then deck houses and finally masts.

b. Lighthouses are placed on cliffs or high rocks so that their light will be seen as far as possible.

c. The moon is round like the earth. This we are able to see when we look at it. If there were people on the moon the earth would look round to them just as the moon does to us.

It will be well to say something of the force of gravity that holds all

objects to the surface of the earth. If the pupils do not raise the point themselves it should be brought out by the teacher that in old times men could not believe that the earth was round because they thought that in such case all loose objects would fall off from it on the other side. Explain as clearly as the intelligence of the class will allow that there is a force of attraction exerted by the earth on all objects on it and that this force called gravity holds objects to it. The force of gravity may be likened to the attraction exerted by a magnet on bits of iron and a simple demonstration with such a magnet will do something toward making the idea plain. At this stage of the work the teacher will find it necessary to rest content with little more than a word knowledge on the part of the class of the force of gravitation. It is well, however, for them to have the term and to see in some partial degree what it means. A fuller understanding will come with the work of later lessons and grades.

Globes should be in the hands of the pupils of this lesson's work. They should trace the route taken by Magellan's ships. Have them place the card with the small circular hole in it over a part of the surface of the globe as well as over the orange or ball, thus illustrating that a small part of the earth seems flat when seen by itself.

2. The size of the earth. (One day.)

Suggestions.—Follow what the text has to say on the subject and add some simple unit of comparison so that they may get an idea of the diameter and the circumference of the earth. For example, it is eighty times the distance between Sacramento and San Francisco; or, perhaps, some shorter distance will be better.

II. **Daily motion of the earth and its results.** (Pages 123–126.)

1. Daily motions of the earth. (One day.)

2. The results of the daily motions of the earth. (One day.)

III. **The zones.** (Pages 128–131.)

1. Review the locations. (One day.)

For this review see Chico Normal Bulletin No. V, Part I, Map Geography, pp. 34–35.

2. The Torrid Zone. (One day.)

Ref.—Coe, Our American Neighbors, pp. 89 ff.

Suggestions.—The object should be to give the idea that this region is warm and has luxuriant vegetation.

3. The Temperate Zones. (One day.)

Suggestions.—Vegetation grows readily but temperature is not so high.

4. The Frigid Zones. (One day.)

Suggestions.—Sparse vegetation and low temperatures.

IV, V and VI are omitted here as they are otherwise provided for.

Map Drill.—Before taking up the study of North America as given in the introductory text, give a thorough review of the map work as given in Bulletin No. V. This should be *North America* both *First* and *Second Time Over.* (See Bulletin No. V, pp. 18–19; 36; 46.)

VII. NORTH AMERICA, (Ch. VII, pp. 151–152.)

1. North America is a large continent with mountains along its eastern and western sides and a great valley in the middle. (One day.)

Suggestions.—Develop in the minds of the pupils a picture of the relief of North America.

2. North America is divided into Alaska, the Dominion of Canada, the United States, Mexico and Central America. (One day.)

Suggestions.—This topic is intended, primarily, to fix the boundaries and locations of the different divisions of North America in the minds of the pupils.

VIII. **The United States.** (Ch. VIII, p. 141.)

DO NOT NEGLECT THE DAILY REVIEW.

1. This great country belongs to us. It has grown from thirteen small colonies along the Atlantic coast into a great nation. The flag tells us of its growth. (One day.)

Suggestions.—Take up a study of this topic under the following headings: thirteen original colonies; war for independence; change from Colonies to States; how the flag shows this and also the fact that the number has increased; the Indians and how they were treated; the fact that there are no Territories within the United States now.

IX. **New England.** (Ch. IX, pp. 154–160.)

*1. New England was settled by the Pilgrims. They were a brave, sober-minded and thrifty people. (One day.)

Refs.—Pratt, Stories of Massachusetts, pp. 13–68.
McMaster, Primary History of United States, pp. 16–20; 56–72.

Suggestions.—Discuss why the name New England was used; the fact that the early settlers had the qualities mentioned above and how these qualities led to success; note the irregularities of the coast line and what advantage this is to the region.

2. Many hardy New Englanders win their living from the sea by fishing. (Two days.)

Refs.—Carpenter, North America, pp. 315–316.
Pratt, Stories of Massachusetts, pp. 201–248.

Suggestions.—Read *Captains Courageous,* by Kipling, if available. Take an imaginary journey with a fisherman to see him make a catch.

3. Vermont is famous for its marble quarries. (One day.)

Refs.—Fairbanks, Home Geography, pp. 112–115.
Carpenter, North America, pp. 88–89.
King, Book III, pp. 65–68.

Suggestions.—Visit a marble quarry by means of pictures and stories. Notice how the rock is blasted out, then, sawed into blocks, hoisted out of the pit and finally loaded upon the cars to be sent away. Blackboard sketch.

FIG. 1.—Tapping a maple tree.

4. Maple sugar is made from the sap of the maple tree. (One day.)

Refs.—Chamberlain, How We Are Fed, pp. 87–90.
Carpenter, North America, pp. 89–90.
King, Book III, pp. 75–77.
Carroll, Book III, pp. 198–201.
Chamberlain, North America, pp. 18–20.

Suggestions.—Visit the "Sugar Bush" and watch the men do their work. Notice how they tap the trees; how the sap is collected and taken to the large kettle where it is boiled for quite a while and is finally ready for the "sugaring off." Point out the difference in the making of sugar and syrup. (See Fig. I, showing method of tapping trees.)

5. There are many factories along the coast and the rivers of New England. A visit to a great factory is very interesting. (Two days.)

Refs.—Chamberlain, How We Are Clothed, pp. 96–105; 34–44; 162–170.
Allen, Industrial Studies, pp. 76–79.
Carpenter, North America, pp. 76–80; 82–84.

Suggestions.—Time will not permit intensive study of more than one industry. Let the class choose the one they would like to know more about from the following: cotton mills, iron goods, woolen mills, boot and shoe factory, watch and clock factories. Take them on an imaginary journey to it. Notice the raw material as it is brought in, how it is changed as it goes through the different parts of the process and finally comes out as some article well known to them.

X. **Middle Atlantic States.** (Ch. X, pp. 161–170.)

1. New York is the largest city in our land. The following sights are of interest to the visitor: Liberty Statue; crowded streets and different kinds of street railroads; Brooklyn Bridge; sky-scrapers; Central Park. (Three days.)

Refs.—Carroll, Book III, pp. 4–13.
King, Book III, pp. 154–169.
Dodge, A Reader in Physical Geography, pp. 23–26.

Suggestions.—A general tour of New York City will serve to fix these points. In order to do this satisfactorily it will be necessary to supplement the text by reading from the above references.

*2. Dairying is an important activity in New York State. Some of our best cheese is made there. (One day.)

Refs.—Carpenter, Foods, pp. 107–126.
Allen, Industrial Studies, pp. 226–231.
Chamberlain, How We Are Fed, pp. 41–54.

Suggestions.—Watch the men care for the cows as well as for the milk. See how they tie the cows in the warm, clean stables where they are milked. It will be interesting and instructive to notice how the butter and cheese are made.

3. Coal is found in large quantities in Pennsylvania and West Virginia. (Two days.)

Refs.—Carpenter, North America, pp. 211–218.
Bradish, Stories of Country Life, pp. 96–130.
Fairbanks, Stories of Mother Earth, pp. 177–182.
Shaler, Story of Our Continent, pp. 215–219.

Suggestions.—Give a brief history of its formation and tell how it is mined. To get a good idea of the latter it will be best to take an imaginary excursion into a coal mine. Here the pupils should see (by means of pictures) how the coal is loosened, loaded into the cars or buckets and brought to the surface. (Blackboard sketch of coal mine.)

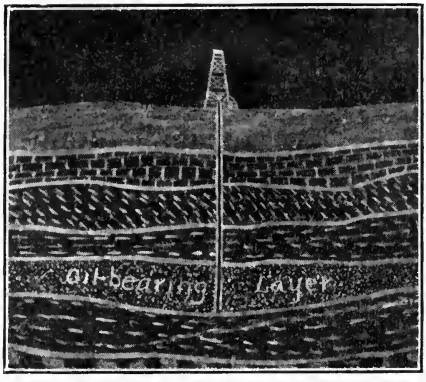

FIG. 2.—A cross-section through an oil well.

4. Iron mining and manufacturing are important activities in Pennsylvania. (Two days.)

Refs.—Carpenter, North America, pp. 218–225.
Bradish, Stories of Country Life, pp. 134–146.
King, Book IV, pp. 51–60.

Suggestions.—This topic can be treated much the same as the one on coal. Then follow by a visit to a factory to see how both the coal and the iron ore are used in the work of making the latter into useful articles. Care should be taken to avoid technicalities and uninteresting details of the process. (Blackboard sketch will be valuable.)

5. Great fields of oil and gas are found in Pennsylvania and West Virginia. (Two days.)

Refs.—Carpenter, North America, pp. 203–210.
Carroll, Book III, pp. 60–62.
King, Book IV, pp. 61–70.

It is interesting to teach how the wells are drilled and how the oil and gas are cared for. The oil being run into large reservoirs or tanks to be kept until it is needed. Much of it is made into such useful oils as kerosene and gasolene. (See Fig. 2, showing cross-section through an oil well.)

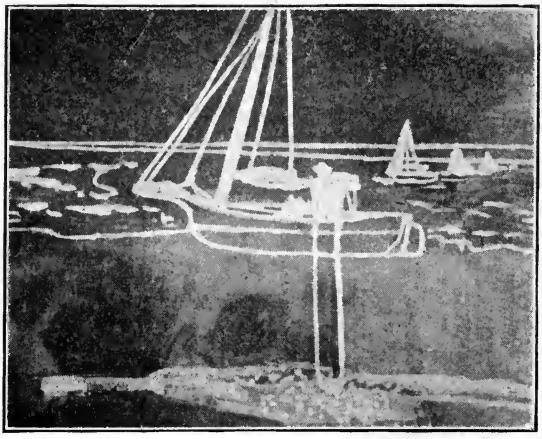

FIG. 3.—Catching oysters.

*6. Chesapeake Bay is famous for its oysters, and Baltimore is the center of the oyster trade. (One day.)

Ref.—Chamberlain, North America, pp. 46–52.

Suggestion.—Watch them plant the little oysters, then, see how they fish for the grown ones. (See Fig. 3, showing how they catch oysters.)

7. Washington City is said to be the most beautiful city in the United States. It has clean streets, wide and well shaded, and many parks. In the Capital grounds the great Capitol Building and the White House are located. (Two days.)

Refs.—Carpenter, North America, pp. 14–15.
Smith, Our Own Country, pp. 11–20.
Our Country East, pp. 131–143.
Carroll, Book III, pp. 47–52.
Chamberlain, North America, pp. 53–60.

Suggestions.—Show pictures of the above and point out the things mentioned together with any other interesting points in the pictures.

*8. Tobacco is the best known product of Virginia. (One day.)

Ref.—Allen, Industrial Studies, pp. 302–307.

Suggestions.—Here is a good chance for a lesson on the use of tobacco. Point out that the cigars smoked in one year would pay for all the damage done by the San Francisco fire and earthquake.

XI. **Southern States.** (Ch. XI, pp. 171–179.) (Two days.)

1. Cotton is the great product of the sunny South.

Refs.—Chamberlain, How We Are Clothed, pp. 39–56.
Carroll, Book III, pp. 159–166.
King, Book IV, pp. 17–20; 33–35.
Carpenter, North America, pp. 109–118.
Smith, Our Own Country, pp. 131–133.

Suggestions.—Show pictures of the "mammies" picking cotton and the little kinky-haired pickaninnies playing on the newly picked cotton, then show one of the cotton picking machines. Compare the amount of cotton picked, by the two methods, in a day. Visit a cotton gin (by means of pictures and explanations) and notice how the cotton is separated from the seed. It will be interesting and instructive to show the cotton, (1) in the blossom, (2) in the boll, (3) after the seed has been removed, and, (4) in the form of manufactured goods of some sort, *e. g.*, cloth or rope.

2. Texas is the largest state in the Union. It is known for its cattle ranches in the interior and the cotton fields along the coast. (One day.)

Refs.—Smith, Our Own Country, pp. 139–145.
Allen, Industrial Studies, pp. 51, 54, 55, 58, 61, 209–210.

Suggestions.—Go out with the cowboys and watch them make a "roundup." See how the cattle are herded together to be separated so that the calves may be marked and branded. Then later in the year they round the cattle up for the purpose of separating the beef from the stock cattle. The life of the cowboy is very dangerous and quite often he is badly injured by having a horse throw him or fall upon him.

3. Sugar is made from the juice of the sugar cane which grows in abundance along the moist, warm plains near the Gulf of Mexico. (One day.)

Refs.—Carpenter, North America, pp. 143–150.
Allen, Industrial Studies, pp. 66–79.

Suggestions.—Notice how the ground is prepared for the planting of the sugar cane. The cane is then cut into lengths of about a foot, dropped into the furrows and covered with soil. Notice, later, how much it resembles corn and how it is cared for till it is ready to be harvested. Mention the fact that the juice is pressed out of the cane and boiled down to be made into sugar, but do not attempt to give the process in detail.

4. The warm climate and rich soil of the south produce crops of oranges, lemons, peanuts, sweet potatoes, and pineapples. (Two days.)

Refs.—Carpenter, North America, pp. 130–135.
Our Country East, pp. 106–110.
Rupert, Geographical Reader, pp. 20–22.

Visit the various orchards, groves or fields and note how these fruits grow. These are all well known to many children of our state and will require but little time, except the pineapple. It resembles a pine cone yet does not grow on a tree as many people suppose. (See the picture on page 174 of the text.) Good pictures will furnish the best notion of how it grows.

5. Rice is raised in low, marshy regions, particularly in South Carolina. (One day.)

Refs.—Chamberlain, How We Are Fed, pp. 70–76.
Kirby, The World by the Fireside, pp. 93–102.
Smith, Our Own Country, pp. 128–130.
Carpenter, North America, pp. 120–122.

Suggestions.—Notice how the fields are prepared for the planting, how they are flooded, drained, cultivated, flooded again, and finally harvested. Then comes the hulling and polishing. Call attention to the similarity between a head of rice and a head of wheat or oats.

6. New Orleans is a busy city, established long ago by the French. It is so low that great levees have been built to keep out the Mississippi River. (One day.)

Refs.—Our Country East, pp. 67–72.
Carpenter, North America, pp. 138–143; 150–158.
King, Book IV, pp. 17–42.
Dryer, Lessons in Physical Geography, pp. 74–79.

Suggestions.—A trip along the levee will be instructive. Here they will see hundreds of bales of cotton waiting to be shipped to the factories, thousands of pounds of sugar and rice in sacks, and barrel after barrel of molasses that has been made from the sugar cane. Altogether this will be found to be a very busy place, for men will be loading and unloading vessels of all sizes and descriptions.

XII. **Central States.** (Ch. XII, pp. 180–189.)

GIVE YOUR REVIEWS EACH DAY. See pages 63 to 80.

1. The Mississippi River flows through the heart of the Southern and Central States. A trip up this river show us much of the central part of our country. (One day.)

Refs.—Carpenter, North America, pp. 156–158.
Smith, Our Own Country, pp. 155–163.

Suggestions.—Take an imaginary journey up the river. Notice the trees and vines along the river banks. Now and then we pass an opening in the trees cut by some farmer who has been clearing some land for a farm. Notice the fields of sugar cane and cotton as we get farther up the river. Small towns are seen quite frequently and occassionally a large city is passed. The river is so crooked that it seems, at times, as if we were right back where we were an hour or two before. Large levees are built along the banks to keep the river from overflowing in the winter time. Sometimes they break and then people are in danger of being drowned.

2. In the Central States are the prairies, vast, grass-covered, rolling lowlands, upon which are now raised enormous crops of corn and wheat, and which supply feed for thousands of cattle and hogs. (Three days.)

Refs.—Chamberlain, How We Are Fed, pp. 7–43.
Fairbanks, Home Geography, pp. 189–198.
Bradish, Stories of Country Life, pp. 26–27; 89–95; 147–170.
Carroll, Book III, pp. 76–85.
Smith, Our Own Country, pp. 109–114; 170–178.
Rupert, Geographical Reader, pp. 39–45.
Carpenter, North America, pp. 159–171.

Suggestions.—Notice the broad, level prairies that were at one time covered with grass. This has all been plowed under to make room for fields of corn and wheat. Take a trip on the train to see how extensive these corn fields really are. Study how it is planted, cultivated and

harvested. See what it is used for. Study wheat growing in the same way. Compare the life in the corn belt with that in the wheat belt.

3. Chicago is famous for its stockyards and grain elevators. No city has had a more remarkable and interesting growth. (Two days.)

Refs.—Carpenter, North America, pp. 168–171.
Chamberlain, How We Are Fed, pp. 24–31.
Rupert, Geographical Reader, pp. 36–39.

Suggestions.—Spend one day on a visit to the stockyards and one day at the grain elevators. At the stockyards, notice the men unloading the cattle from the trains. See how they weigh and examine them for disease. Go to the slaughterhouses and see how the cattle are killed and made ready for the market. At the grain elevators, see the large bins into which the grain is passed to be stored ready for shipment to other places. Notice how the grain gets into these bins, how it is weighed, and how it is taken out to be shipped.

4. Iron and copper are important products along the shores of Lake Superior. (One day.)

Refs.—Rupert, Geographical Reader, pp. 30–31.
Carroll, Book III, pp. 75.
Carpenter, North America, pp. 179–184.

Suggestions.—Visit the copper mines. Tell the story of how the copper mines were discovered by a pig. See the copper in the rocks as almost pure metal. Visit the smelter and notice how the ore is put into the furnace together with coal and limestone. Here it is heated very hot and comes out at the bottom as melted copper. See how the men dip it up in ladles and pour it into iron molds. This makes it into long narrow bricks ready for shipment.

XIII. **Western States.** (Ch. XIII, pp. 190–202.)

DAILY REVIEWS. See pages 63 to 80.

1. Much of the western part of the United States is wild and rugged and therefore is thinly settled. (One day.)

Refs.—Carpenter, North America, pp. 256–259.
Smith, Our Own Country, pp. 175–183.
Shaler, The Story of Our Continent, pp. 138–140.

Suggestions.—Show, by means of pictures, the rugged plateaus, the high snow-capped mountains, the level parks surrounded by high hills, so that the children may readily see for themselves why this region is so thinly settled. Use pictures wherever possible to obtain them.

2. The western mountains are famous for their scenery and natural wonders. The following are points of interest to the tourist: Yellowstone Park, Pike's Peak, Mountain of the Holy Cross, Garden of the Gods, Grand Canyon of the Colorado, the petrified forest of Arizona, Yosemite Valley. (Eight days.)

Refs.—Johonnot, Geographical Reader, pp. 155–158; 352–360; 375–382.
Our Country West, pp. 161–167.
Rupert, Geographical Reader, pp. 52–53.
Carpenter, North America, pp. 284–289; 273–274.
Smith, Our Own Country, pp. 183–187.
Carroll, Book III, pp. 144–146; 108–111.
Shaler, Story of Our Continent, pp. 110; 138–140.
Chamberlain, North America, pp. 125–133; 142–149.

Suggestions.—The most valuable material for this section is a good series of pictures. In the Yellowstone National Park you will see the Yellowstone River with the wild ducks swimming in the clear, cool water. You may wish to go fishing for trout if time permits. Farther up the stream are the beautiful falls and magnificent canyon. Visit the Mammoth Hot Springs, the old geysers that have ceased to act and the ones that are active at the present time. You will also want to make a visit to Pike's Peak and ascend the mountain by means of the cog railway. The Mountain of the Holy Cross can be seen from the train as we journey along. It will be worth while to visit the Garden of the Gods (by means of pictures) and notice how nature has worked wonders in the sculpture of the surface of the earth. Pictures will be valuable in describing the beauties of the Grand Canyon of the Colorado River, and the Petrified Forests of Arizona. Visit the beautiful falls, the clear lakes and the cool, bubbling streams of the Yosemite.

3. On the dry plateaus are found great herds of cattle, sheep, and horses. This is the land of the cowboy. (Two days.)

Refs.—Chamberlain, How We Are Fed, pp. 59–71.
Rupert, Geographical Reader, pp. 7–8; 73–76.
Carpenter, North America, pp. 258.
King, Book V, pp. 1–12.
Our Country West, pp. 197–243.
Carroll, Book III, pp. 139–141.

Suggestions.—In imagination, mount a bronco and spend a day or two with the cowboy. Help him to make a "roundup" and separate the calves from the main herd. Notice whether or not he is the same as the cowboy we met in Texas. Watch the busy little shepherd dog as he helps take care of the sheep. See how well trained he is. Try to corral a band of horses and see how much more difficult it is than to handle the same number of cattle. How do they brand sheep?

4. Salt Lake City and the region around it show what irrigation can do for the desert region. (One day.)

Refs.—Carpenter, North America, pp. 259–261; 263–264.
Smith, Our Own Country, pp. 193–194.
Carroll, Book III, pp. 147–149.

Suggestions.—Note the valuable farms that have been reclaimed by water. Emphasize the fact that much of this land was of no value until it was irrigated. Notice the clean streets, the Mormon Temple and Tabernacle and any other points of interest about Salt Lake City.

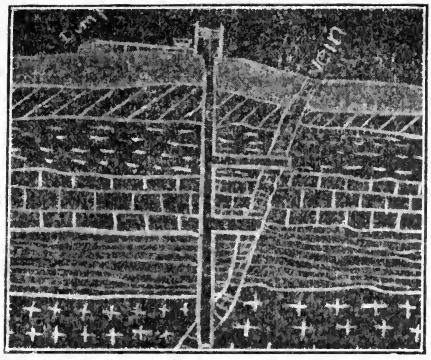

FIG. 4.—Cross-section through a gold mine.

5. The gold and silver mines of the west have attracted many prospectors and settlers. Here is the great gold producing region of the earth. (Three days.)

Refs.—Sexton, Stories of California, pp. 37–66.
Carpenter, North America, pp. 239–248.
Fairbanks, Home Geography, pp. 116–119.
Fairbanks, Stories of Mother Earth, pp. 161–183.
Rupert, Geographical Reader, pp. 87–90.

Suggestions.—Pay special attention to the "gold rush" and trace, briefly, some of its results. See the different ways in which gold is gotten from the earth. Mention the hardships faced by the people who crossed the plains in the early days and why they should take such chances. A result of the "gold rush" is the settlement of the Pacific coast.

6. California is famed for her many kinds of fruits. (Two days.)

Refs.—Carpenter, North America, pp. 266–271.
King, Book V, pp. 128–129; 206–215.
Chamberlain, How We Are Fed, pp. 165–182.
Sexton, Stories of California, pp. 83–101.
Chamberlain, North America, pp. 150–166.

Suggestions.—Visit the orchards and notice how the trees and fruit are cared for. It may be possible to take a real excursion which will be much better than an imaginary one. Oranges, grapes and prunes are perhaps the most important of the general orchard products, but in case any other fruit is important in your region, make a particular study of it and a comparative study of the ones mentioned above.

7. Great redwood and pine forests are found along the Pacific coast and in the Sierras, and lumbering is an important occupation. (Two days.)

Refs.—Carpenter, North America, pp. 271–273.
Carroll, Book III, pp. 108–110.
Our Country West, pp. 131–139.
Fairbanks, Home Geography, pp. 199–205.
King, Book V, pp. 165–170.

Suggestions.—A day in the woods will do much to drive home the points of this topic. Notice how the logs are cut and how they are gotten to the mill to be made into lumber. Give some little idea of the difference

between scientific lumbering where only the ripe trees are cut and destructive lumbering where all of the trees are cut irrespective of whether they are mature or not. Notice how the redwoods are being exterminated.

8. Seattle, Los Angeles and San Francisco are the three principal cities of the Pacific coast. Each is rich in the resources it has behind it. (Three days.)

Refs.—Sexton, Stories of California, pp. 169–179.
Smith, Our Own Country, 213–217.
Carpenter, North America, pp. 274–278.

Suggestions.—Take a day for each city. Emphasize the things listed below.

SEATTLE.—Notice that it has a cool climate in summer and a moderate one in winter. Snow falls here in the winter but is soon melted by the warm winds. A short distance from the city is the beautiful Mount Rainier, one of the highest peaks in this region. Notice the fruits of this region and the trade with Alaska and the Orient.

LOS ANGELES.—A large, prosperous city in a region of orange groves. It has a good climate in both summer and winter. Many tourists come here for their health and to spend the winter months. Here we find many good schools.

SAN FRANCISCO.—Situated on the San Francisco Bay, where the large ships from all parts of the world come with passengers and freight; this is going to continue to be a very important city. A large park furnishes an excellent place to spend a few restful hours. Watch the animals and sit under the trees. The Ferry Building as well as the ferries that cross the bay are of interest. Notice some of the factories. Call attention to the fact that it is the gateway to the interior not only of California but also parts of the Rocky Mountain states.

XIV. **Alaska.** (Ch. XIV, pp. 203–204.)

GIVE YOUR REVIEWS EACH DAY. See pages 63 to 80.

1. Alaska, a territory of the United States, lies in the far north. Its winters are long and cold and great portions of its surface are covered with bleak tundras. (One day.)

Ref.—Carpenter, North America, pp. 298–300.

Suggestions.—Explain, by the use of pictures, how the country looks both in winter and in summer. The high mountains, glaciers, icebergs, the interior and northern part covered with snow the greater part of the year, the tundras or frozen swamps in the north, and the forests, flowers and fruits of the southern edge of Alaska are points to be considered here.

2. In the southern part of Alaska, along the Pacific coast, forests are found and salmon fishing is carried on. Gold is an important product of Alaska; the life of the northern prospector is one of hardship and adventure. Near Sitka are found the strange totem poles. (Four days.)

Refs.—Carpenter, North America, pp. 307–309.
Our Country West, pp. 3–11; 45–48; 21–25; 37–39.
Smith, Our Own Country, pp. 197–198.
Herbertson, North America, pp. 21–24.
Horton, The Frozen North, pp. 94–103.
Carroll, Book III, pp. 122–131.
King, Book IV, pp. 92–94.

Suggestions.—Spend one day on the salmon industry, telling how the salmon live in salt water, go up the rivers to spawn and die. Tell how the young hatch and find their way back to the ocean. Here they grow to be large fishes and in turn ascend the streams. Study the way they are caught and canned so they may be kept for use as they are needed. Spend one day with the gold hunter. Note his mode of life, the hardships he endures, how he gets the gold, and compare these with the life of the miner in California in the early days. Notice the forests along the coast of southern Alaska. Take a trip through the Inland Passage and notice the beautiful scenery. Notice the situation of Sitka and find out what the use of the totem poles is.

3. The Pribilof Islands in the Bering Sea are the home of the fur seal. (Two days.)

Refs.—Our Country West, pp. 49–56.
Chamberlain, How We Are Clothed, pp. 147–153.
Carpenter, North America, pp. 303–306.
Jordan, Matka and Kotik. (Parts.)

Suggestions.—Spend the time allotted to this topic on the habits of the seals, how they care for their young, how they obtain their food, where they live winter and summer, and what their skins are good for. Tell of the way the seals are killed and use it as a means of teaching a lesson in sympathy for dumb animals. Show how it will be best to conserve the seals by killing only certain ones and not killing every one within reach.

4. Along the northern and northwestern coasts of Alaska are found the Eskimos. They are a short, dark race, wearing fur garments, driving dog teams and living in curious huts. They are a peaceable people and gain their living by hunting and fishing. (Two days.)

Refs.—Schwatka, Children of the Cold. (Whole book.)
Carpenter, North America, pp. 301–302.
Wade, Our Little Eskimo Cousin. (Whole book.)

Suggestions.—Teach the habits and customs so far as time will permit. The trouble here will be to know when to stop.

XV. **Canada and Other Countries north of the United States.** (Ch. XV, pp. 205–210.)

DO NOT OVERLOOK THE DAILY REVIEW. See pages 63 to 80.

1. Canada belongs to England. The resources of southern Canada are much the same as those found in bordering regions of the United States. (Two days.)

Refs.—Carpenter, North America, pp. 315–327.
Shaler, Story of Our Continent, p. 178.
King, Book II, pp. 146–250.
Herbertson, North America, pp. 30–48; 50–81.

Suggestions.—Take one day on the region from Lake Superior east. Pay particular attention to the river industries. Take one day from Lake Superior west. Note particularly the wheat belt, the immense forests reaching from the Atlantic Ocean to the Rockies, herds of cattle on the grassy foothills of the Rocky Mountains, large grainfields bordering the United States, the glaciers and other beautiful scenery of the mountains and the fishing of the streams and the Great Lakes.

2. Northern Canada is wild and bleak. Its dark forests and bleak tundras are traversed by hunters, trappers and Indians. (One day.)

Refs.—Carpenter, North America, pp. 310–314.
Rupert, Geographical Reader, pp. 93–99.
King, Book II, pp. 170–177.

Suggestions.—Call attention to the similarity between this region and northern Alaska. White men are seldom seen here. Wild animals of all sorts are abundant and are killed by the natives for their valuable furs. It would be interesting to go on a moose hunt. Ships can enter the Hudson Bay only two or three months in the year.

3. The islands north of North America are mostly covered with ice and snow. They are visited only by polar explorers and adventurous fur traders. Greenland, owned by Denmark, is almost covered by a great glacier. (Two days.)

Refs.—Kirby, The World by the Fireside, pp. 27–29.
Shaler, Story of Our Continent, pp. 79–80; 126–127.
Carpenter, Australia and Islands, pp. 375–380.
Horton, The Frozen North. (Parts.)

Suggestions.—Spend the time talking over the work of such men as Franklin, Kane, Greely, Schwatka and Nansen in exploring the Northland. Note particularly the hardships due to cold and also lack of roads. Study Greenland by crossing it as Nansen did. (See, Horton, pp. 104–121.)

XVI. **Countries south of the United States.** (Ch. XVI, pp. 211–215.)

1. Mexico is famous for its silver mines and its herds of cattle and horses. (One day.)

Refs.—Carpenter, North America, p. 343.
Herbertson, North America, pp. 216–217.

Suggestions.—Take a journey to the volcano Popocatepetl and notice the herds of cattle, sheep and horses on the foothills along the way. Visit the silver mines and notice what kind of people do the work.

2. Central America consists of a number of disorderly republics. Its climate is hot and unhealthful, and tropical forests and products are to be found. (Two days.)

Refs.—Herbertson, Central and South America, pp. 38–40; 49–52.
Carpenter, North America, pp. 345–352.

Suggestions.—Notice the warm climate, the tropical vegetation, and fruits such as coffee, bananas, cocoa, thickly growing trees, among which we notice the rubber trees, and the vines that twine from tree to tree. Such valuable

woods as mahogany, ebony and rosewood are found here. The people are much like the Mexicans. These countries are often at war with each other.

3. The natives of Mexico and Central America are mostly a mixture of Spanish and Indian blood. As a rule they are poor, ignorant and lazy. They live in wretched huts and have the barest necessaries of food and clothing. (One day.)

Refs.—Carpenter, North America, pp. 327–330; 334; 336–345.
Herbertson, North America, pp. 217–219; 221–222.
Rupert, Geographical Reader, pp. 111–117; 119–120; 131–133.

Suggestions.—Take a drive around the City of Mexico and notice the few rich people riding in their carriages and the many poor people walking. Corn is the chief food of the poor people. See how they prepare it for food. Emphasize the things mentioned in the paragraph above and show how ignorance and poverty are usually akin.

4. Cuba, the largest island of the West Indies, is now an independent nation. Its principal products are sugar and tobacco. Havana is the center of its trade. (Two days.)

Refs.—Carpenter, Australia and Islands, pp. 357–366.
Carroll, Book II, pp. 163–173.
Wade, Our Little Cuban Cousin, pp. 45–71.
Seabury, Porto Rico, pp. 84–98.

Suggestions.—Bring out some of its history, especially the part played by the United States. Compare the cultivation of the sugar here with what we saw in the Southern States. Some of the finest tobacco in the world is grown here.

Map Drill.—Give a map drill on North America, including the United States. (See Bulletin No. V, pp. 18 ff.; 31–32; 36; 46.)

XVII. SOUTH AMERICA. (Ch. XVII, pp. 216–224.)

Remember your daily review. See pages 63 to 80.

Map Drill.—Give a map drill on this continent before taking up the descriptive work. (See Bulletin No. V, pp. 25; 37; 46–47.)

1. A trip to the summit of the Andes Mountains takes us from tropical lowlands to regions of perpetual snow. Many interesting sights may be seen on the way. (One day.)

Refs.—Coe, Our American Neighbors, pp. 268–270.
Carpenter, South America, pp. 115–123.
Kirby, World by the Fireside, pp. 142–145.

Suggestions.—Take the train at Valparaiso for a trip over the mountains. At first notice the vineyards and orchards of orange and lemon trees, then the cultivated fields where the men are plowing with oxen, the high two-wheeled carts used to haul the grain to the stations to be shipped to other places, the high Andes, the little stone huts on the mountains to serve as shelter during storms, the monstrous condors, and finally the pampas of Argentina, which we shall see again.

2. The Incas once ruled over the Indians whose descendants still live in the highlands of Peru. These Indians had a considerable

degree of civilization. They were conquered by Pizarro. (One day.)

Refs.—Coe, Our American Neighbors, pp. 287–288.
Markwick and Smith, South American Republics, pp. 24–25.

Suggestions.—Make a study of the Incas civilization, such as the temples found by the Spaniards, Cuzco the chief city of the Incas, their queer, bright-colored clothing, their queer shaped hats and the odd knit caps.

3. Along the Amazon River the climate is hot and moist. Forest creepers and orchids are found in profusion; strange animals abound. Here are the great forests of rubber trees. (Two days.)

Refs.—Carpenter, South America, pp. 300–327.
Coe, Our American Neighbors, pp. 223–237.
Strange Lands Near Home, pp. 52–59.
Markwick and Smith, South American Republics, pp. 205–220.

Suggestions.—The size of the river, the many islands, the queer huts along the banks, the dugout boats in which the people go from one place to another, the massive trees and air plants, numerous bright-colored birds, the many animals, cacao trees, Brazil nut trees, and rubber trees are among the things to be noted. Visit a rubber plantation and watch the men gather the sap and prepare it to be shipped away.

4. Argentina and the La Plata prairies are covered with wheat fields and herds of cattle. Here are the pampas lands. (Two days.)

Refs.—Coe, Our American Neighbors, pp. 263–265.
Carpenter, South America, pp. 192–200; 188–192.
Markwick and Smith, South American Republics, pp. 239–247; 265–269.
Herbertson, Central and South America, pp. 130–132.

Suggestions.—Put one day on Buenos Aires and one day on the wheat and cattle region. Compare these regions with our own country. In Buenos Aires the following points are of interest: the factories, the shipping of wool, the colleges and churches, the people, the Basques, the various markets, the peddlers and the city parks. In the wheat region notice the large fields, the locusts, plowing and sowing, harvesting and shipping, the absence of barns, and compare with the United States in these things. In the cattle region notice the cowboys and their outfits, and see how they differ from those we saw in Texas and the Western States. Pay special attention to the character of the pampas lands.

Map Drill.—Give a map drill on South America. (See Bulletin No. V, pp. 25; 37; 46–47.)

XVIII. EUROPE. (In general.) (Ch. XVIII, pp. 225–245.)

Map Drill.—Give a map drill on Europe before taking up the descriptive work. (See Bulletin No. V, pp. 29–30; 40; 48–49.)

Remember your daily review. See pages 63 to 80.

1. Europe forms the western section of Eurasia. It is about the size of the United States and Alaska, but its population is almost

five times as great. It is divided into many countries. (Three days.)

Suggestions.—It will be interesting to show by diagram the relative size and population of Europe and the United States.

I. **Great Britain.** (Ch. XVIII, pp. 225–229.)

1. Long ago, after much fighting, England forced Wales, Ireland and Scotland under its domain. Now they are called Great Britain and Ireland and are under a single government. (Two days.)

Refs.—Guerber, Story of the English, pp. 13–17; 24–26; 44–53.
Pratt, Stories of England, pp. 5–65.
Peeps at Many Lands—Ireland. (Pictures.)

Suggestions.—Take a brief glimpse at the early peoples of this region, note how changes were brought about by invasions from the main land. Then call attention to the fact that Scotland sought to form and maintain a separate government, as did also Ireland. But now they are together in a single unit. Pictures will be found very valuable here.

2. Great Britain has possessions in many lands and is the most powerful nation in the world. She is called the "mistress of the seas." (One day.)

Suggestions.—Call attention to the fact that the "Sun never sets on English territory." Notice some of the most important possessions, such as Canada, India, New Zealand, Australia and portions of South Africa. Her greatness and supremacy are due to her large navy and great number of merchant vessels.

3. London is a great center of commerce and is the largest city in the world. (Two days.)

Refs.—Carpenter, Europe, pp. 66–84.
By Land and Sea, pp. 3–11.
Ballou, Footprints of Travel, pp. 321–333.

Suggestions.—Notice the large number of ships coming and going. View them from London Bridge or visit some of the docks. This will be sufficient to indicate the value of the commerce. Call attention to the enormous size of the city and take a trip through parts of it to see such sights as London Bridge, Thames River, the narrow crowded streets, St. Paul's Cathedral, Bank of England, Tower of London and the Westminster Abbey.

4. Vast deposits of coal and iron have made central England rich in mines and factories. (One day.)

Ref.—Carpenter, Europe, pp. 57–58.

Suggestions.—Visit the coal fields and the iron mines in the different parts of the country and notice that the factories are situated near them. Pay some attention to the knife factory, for the girls and boys all have use for knives. Note that many of the things used in making the knives come from other places. This is a dirty region because there is so much coal smoke from the factories.

5. Glasgow, Scotland, is known for its shipbuilding. (One day.)

Refs.—George, Little Journeys to Scotland and Ireland, pp. 8–13.
Knox, Great Britain and Ireland, pp. 113–134.

Suggestions.—Glasgow is a smoky city, much the same as those we saw farther south. Here we notice large numbers of ships and learn that many of them are built here. Visit the shipyards and notice the large ships that are just being built. It is extremely noisy because so many hammers are going at the same time. Notice what kinds of materials are used in building the ships.

6. Ireland is largely given over to farming. Much of the food of England is raised in Ireland. (Two days.)

Refs.—Little Journeys to Scotland and Ireland. (Parts.)
Carpenter, Europe, pp. 15–30.

Suggestions.—In teaching this section notice particularly the damp climate, the green trees, beautiful gardens, lakes, swamps, farms of rich black soil, queer carts on which we may ride when we go there, the hedges and stone walls, the meadows where fat sheep and cattle are grazing, the growing of potatoes, the poor people, their traits, mode of life, and homes.

7. Great Britain was the home of our forefathers who settled this country. There are many old stories and traditions about Great Britain for us to know, and many interesting places for us to know about. (Four days.)

Refs.—Guerber, Stories of the English, pp. 13–53.
Pratt, Stories of England, pp. 5–52.

Suggestions.—If this has not been covered in the topic given above, it would be well to go back to the Roman Conquest and learn some of the traditions and customs of the early people of this country and some of the fierce battles fought by them in their efforts to be free. Pick out a few of the heroes and tell how they fought for their country. Follow this line of work up to about the time when our forefathers left there. Pictures of the early Britons would lend interest to the subject.

II. **The Norse Countries.** (Ch. XVIII, pp. 229–231.)

*1. The people of Norway, Sweden and Denmark are very much alike in appearance, language, customs and occupations. (One day.)

Refs.—Andrews, Ten Boys. (Parts.)
George, Little Journeys to Norway and Sweden. (Parts.)
Hall, Viking Tales. (Parts.)

Suggestions.—These people are light complexioned, even-tempered, and live by dairying, farming, fishing, and manufacturing. Many of them wear the old-fashioned wooden shoes and queer dresses. Hospitality is one of the chief characteristics. They hang out bundles of grain and ears of corn for the birds at Christmas time. They often carry their produce to market on their backs. Notice the clean, narrow streets in the cities. Many of the stores are in the second story. The reindeer of Lapland is interesting and important.

*2. Since early times the people of Scandinavia have been famous seafarers. (One day.)

Refs.—Davis, Norway Nights and Russian Days, pp. 45–52.
Carroll, Book II, pp. 83–87.
Ballou, Footprints of Travel, pp. 239–240; 252–253.

Suggestions.—Show that since there is so much water and so many good harbors here the men naturally take to the seafaring life. They are great fishermen and the best of sailors. They will be found on the merchant ships of all nations. Cod and herring are among the most important fish of this region.

3. The climate of Norway, Sweden, Denmark, and the British Isles as well, is tempered by warm westerly winds blowing across the Gulf Stream. (One day.)

Refs.—Johonnot, Geographical Reader, pp. 330–331.
Carpenter, Europe, p. 168.
Ballou, Footprints of Travel, pp. 238; 266–267.

Suggestions.—The warm water to the west of these countries warms the winds that blow over them so that it is not so cold as it would be otherwise. Compare the people, their habits and customs, the products and the temperature of this region with those of Labrador and Greenland. They would be the same if it were not for the warm winds. Parts of Norway and Sweden are very cold in winter.

III. **The Russian Empire.** (Ch. XVIII, pp. 231–232.)

1. Peter the Great is the best known Russian ruler. He did a great deal to develop his country. (One day.)

Ref.—Carpenter, Europe, pp. 335–339.

Suggestions.—Bring out the fact that, up to the time of Peter the Great, Russia was a backward nation. He set about to develop the navy, improve the foreign trade, and introduced the ways and customs of more advanced nations. In order that he might be able to do better he went to foreign countries to make studies of what he saw there. He worked for a time as a ship carpenter. He improved education, and introduced printing and changes of dress into Russia.

2. Two important exports, wheat and oil, are produced in Russia. The regions to the north are too cold and much of Siberia is too dry for crops. (Two days.)

Refs.—Coe, Modern Europe, Ch. XXI (parts), pp. 359–360; 386–390.
King, Northern Europe, pp. 309–343.
Pratt, Northern Europe, pp. 45–53.
Northern Europe, pp. 109–122.

Suggestions.—Notice the location of the wheat region of Russia, how the land is worked, the crops harvested and sent out of the country, and compare with the same industry in the United States. Take up the oil production and compare with the same industry in our own country. Explain the character and cause of the steppes. Why is the northern part so cold and bleak? Notice the character of the people living there.

3. Those who oppose the Russian government are sent as exiles to Siberia. (One day.)

Refs.—Coe, Modern Europe, pp. 370–374.
Rupert, Geographical Reader, pp. 269–272.
Wade, Our Little Russian Cousin. (Parts.)
George, Little Journeys to Russia. (Parts.)

Suggestions.—Talk over the kind of a government found in Russia by considering the following points: the Czar and his absolute rule; the ignorance of the peasants; how the people sometimes oppose this sort of government; how they are treated in exile.

IV. **Germany.** (Ch. XVIII, pp. 233–234.)

1. Berlin is a city of good rules and is well kept. (One day.)

Refs.—Herbertson, Europe, pp. 64–67.
Carpenter, Europe, pp. 203–223.

Suggestions.—Notice the clean, well-kept streets, the neat houses and parks, and the universities and other schools. This is the capital of Germany and therefore the home of the emperor. The Royal Museum and the art galleries are worthy of mention on account of their size and value.

2. The farming resources of Germany may be well studied by a trip up the Rhine. (Two days.)

Refs.—Northern Europe, pp. 104–108.
Andrews, Seven Little Sisters, pp. 85–97.
Wade, Our Little German Cousin (Parts).
Knox, Northern Europe, pp. 164–172; 182–190.

Suggestions.—Take a trip up the Rhine River, noting the fields of wheat, hops, sugar beets and grapes. Incidentally it would be interesting to notice the old castles and quaint cities along the river.

V. **Holland.** (Ch. XVIII, pp. 234–235.)

1. Holland is largely made up of land won from the sea. On every hand one sees dikes, windmills and canals. (One day.)

Refs.—Carpenter, Europe, pp. 135–140.
Coe, Modern Europe, pp. 137; 133–134.
Peeps at Many Lands—Holland, pp. 17–18.

Suggestions.—Show pictures of the dikes and windmills and also one that will show that the surface of the sea is about on a level with the second story of the houses. Show the need for dikes and the use of canals and windmills.

*2. Most of the people of Holland devote their time to farming or fishing. They are a simple, cleanly and thrifty folk. (One day.)

Refs.—Chamberlain, How We Are Clothed, pp. 21–24.
George, Little Journeys to Holland, Belgium and Denmark. (Parts.)

Suggestions.—Cattle and dairy products should be studied in such a way as to see how they differ from those in the United States. Notice that the country is at no place many hundred feet above the level of the ocean. Amsterdam and Rotterdam are quaint old cities and are important for their commerce.

VI. **Belgium.** (Ch. XVIII, p. 236.)

*1. The lowlands of Belgium and the lowlands of Holland are very much alike in character and occupations of the people. In the cities much manufacturing is done. The country is famous for laces and weaving, and Brussels, the capital, is the home of carpet weaving. (One day.)

Refs.—George, Little Journeys to Holland, Belgium and Denmark. (Parts.)
By Land and Sea, pp. 16–21.

Suggestions.—Call attention to the similarity between this country and Holland and point out the fact that its highlands have a greater elevation above the sea than those of the latter. Notice particularly the Brussels carpet and lace manufacture, and the iron works.

VII. **France.** (Ch. XVIII, pp. 236–238.)

1. Paris, the capital of France, is said to be the most beautiful city in the world. It is full of attractions for visitors. (Three days.)

Refs.—Peeps at Many Lands—France. (Parts.)
By Land and Sea, pp. 22–26.
Coe, Modern Europe, pp. 249–278.

Suggestions.—Visit the picture galleries, notice the beautiful, clean streets, the boulevards, the parks and public fountains. Go out some warm summer evening to watch the gaily dressed men and women promenade. Notice how the Seine River is treated within the city limits.

*2. Silk culture and wine-making are important industries of France. (Two days.)

Refs.—Peeps at Many Lands—France. (Parts.)
Chamberlain, How We Are Clothed, pp. 85–98.

Suggestions.—Study the silk industry by watching the silkworm grow and spin its cocoon, then notice how the silk is gotten from the cocoon and finally woven into cloth. Notice the food of the growing worm. Visit the grape district and compare it with like districts in our own country. Visit the wineries and see them make the wine. Notice the wheat, and sugar beets growing in the northern part.

VIII. **Spain and Portugal.** (Ch. XVIII, pp. 238–240.)

1. Long ago Spain and Portugal had a rich trade with their colonies. Now they have lost their colonies and are very poor. (Two days.)

Refs.—Hale, Stories of the Sea, pp. 52–78.
George, Little Journeys to Italy, Spain and Portugal. (Parts.)
Jenks, The Boy's Book of Explorations, pp. 1–15.

Suggestions.—Take the time to point out on the map the most important of Spain's and Portugal's early possessions and show that they have gradually slipped away till at the present time practically nothing remains in their possession outside of their own boundaries. The chief reason for this has been the brutal manner in which the colonies were ruled.

2. Although most of the people of Spain are poor, they are a happy people and enjoy their holidays, bullfights, siestas, serenades, and gay dances as though they had no worries. (One day.)

Refs.—George, Little Journeys to Italy, Spain and Portugal. (Parts.)
Carpenter, Europe, pp. 428–436; 445–452.

Suggestions.—Take a journey to Spain and attend the various amusements noted above. Notice, also, the dry western plains and the plateaus where cattle and sheep are raised.

IX. **Italy.** (Ch. XVIII, pp. 240–241.)

1. In ancient times Rome was the center of a great empire. The city still shows some ruins that tell of its ancient greatness. (Two days.)

Refs.—By Land and Sea, pp. 32–41.
Carpenter, Europe, pp. 397–428.
Under Sunny Skies, pp. 30–37; 55–66.
The Wide World, pp. 73–78.
George, Little Journeys to Italy, Spain and Portugal. (Parts.)
Wade, Our Little Italian Cousins. (Parts.)

Suggestions.—Visit the Colosseum where the Christians were fed to the lions, the catacombs where the Christians found refuge, St. Peter's church, the Vatican, the Pantheon, the castle of St. Angelo, the Forum, the triumphal arches, and notice the ancient roads.

2. Venice, Milan, Florence and Naples are interesting Italian cities for the tourist to visit. (Four days.)

Refs.—By Land and Sea, pp. 32–41.
Carpenter, Europe, pp. 397–428.

Suggestions.—Spend one day in each of the above named cities. In Venice will be seen: the Grand Canal, the Rialto, the Cathedral of Venice, the church of St. Mark, the buildings decorated with the mosaics, the palace of the Doges, and the Bridge of Sighs. Take a ride in a gondola some moonlight evening. In Naples note the following: the happy people, workshops in the streets, bright colors in the decorations and dresses, stalls along the streets filled with flowers, vegetables or eatables, and the lottery. In Florence look for the following: vineyards and orchards around the city, the lofty Apennines in the distance, the palaces, churches, statues and pictures, the Piazza del Duomo, the Cathedral, the Shepherd's Tower, the Campanile, the Baptistry, the Brothers of Mercy, the happy people and their numerous holidays. In Milan the following will be noted: the great quantity of silk goods in the stores, the Cathedral, the monument of Columbus, and the Lombardy plains surrounding the city.

3. Olives and grapes are important crops in Italy. Sicily is famous for its lemons. The Italian farmer is a thrifty, industrious worker. (One day.)

Refs.—Under Sunny Skies, pp. 19–29; 38–54.
Chase and Clow, Stories of Industry, pp. 49–53; 54–58.
Coe, Modern Europe, pp. 329–331.

Suggestions.—Notice the wheat fields, the orchards and vineyards of the northern part of Italy. Rice is also an important product. Olives are

grown in large numbers and the fruit pickled or made into a high grade of olive oil. Study the life of the peasant, noting how he lives and why he is so happy. Visit Sicily and notice particularly the lemon orchards. Notice the people and their way of living.

X. **Switzerland.** (Ch. XVIII, pp. 241–242.)

1. Switzerland is famous for its mountains and tourists come from all over the world to view its scenery and climb its crags. The Swiss are hardy mountaineers. (Two days.)

Refs.—George, Little Journeys to France and Switzerland, pp. 3–51.
Northern Europe, pp. 225–249.
Shaw, Big People and Little People of Other Lands, pp. 77–82.

Suggestions.—Visit some of the lakes, such as Geneva and Lucerne. Notice the steep crags and mountainsides from which avalances often rush upon the region below, the glaciers of the high Alps, and climb one of the peaks such as the Matterhorn. Go for a toboggan slide with some of the boys and girls and later go hunting for the chamois.

2. The Swiss people are thrifty and industrious. Dairying, wood carving and watchmaking are common activities. (One day.)

Refs.—Northern Europe, pp. 95–103.
Wade, Our Little Swiss Cousin. (Parts.)
Coe, Modern Europe, pp. 236–238.

Suggestions.—Imagine that you are to spend the summer on the Alps with the herdsman while the other folks are busy making hay in the valleys below. Sometimes hay is made from grasses gathered from the rocky mountain sides. Watch the women milk the cows and make cheese and butter from the milk. Compare these with the same things in our own country. Watch the watchmaker, the toymaker or the woodcarver at his work.

XI. **Austria-Hungary.** (Ch. XVIII, pp. 242–243.)

*1. Vienna, on the beautiful Danube River, is the capital of Austria-Hungary. It is a busy commercial center and is one of the most beautiful cities of Europe. (One day.)

Refs.—Under Sunny Skies, pp. 123–131.
Benedict, Stories of Persons and Places in Europe, pp. 252–275.

Suggestions.—Take a trip up the Danube River to Vienna. Notice the castle ruins, the cities, the fields of wheat, and the flocks along the banks of the stream. The people wear queer clothes. Here we will see parks, cathedrals, churches, art galleries and all such things of interest.

XII. **Greece.** (Ch. XVIII, pp. 243–244.)

1. Many old stories and ancient ruins still tell us of the days when the Greeks were the leading people of the world. (Two days.)

Refs.—Andrews, Ten Boys, pp. 48–80.
Carpenter, Europe, pp, 381–392.
Guerber, Story of the Greeks. (Parts.)

Suggestions.—Tell some of the myths that are more or less connected with the early history of Greece. In Athens, the capital, we see magnificent

ruins, the Acropolis, and the Parthenon. Notice the people and their customs, such as the public baker, and the various kinds of peddlers. Fruits, such as oranges and figs, are abundant here.

XIII. **Turkey.** (Ch. XVIII, pp. 244–245.)

1. The Turks are Mohammedans. Constantinople is the capital of Turkey. (One day.)

Refs.—Carpenter, Europe, pp. 371–381.
Knox, Egypt and the Holy Land, pp. 17–20.
Smith, Life in Asia, pp. 314–324.
Starr, Strange Peoples, pp. 60–69.
Wade, Our Little Turkish Cousin. (Parts.)

Suggestions.—Give some of the history of Constantinople, calling attention to the many times it has changed hands. Notice the churches and something of the religion of the Mohammedans, the queer dress of the people, the porters carrying huge boxes on their backs, the thousands of dogs, the bazaars and the building in which many of the government officials stay. Notice the crude methods of farming employed in the country. Call attention to the poor government given these people.

MAP DRILL.—Give a map drill on Europe. (See Bulletin No. V, pp. 29–30; 40; 48–49.)

XIX. ASIA. (GENERAL INTRODUCTION.) (Ch. XIX, pp. 250–251.)

GIVE YOUR DAILY REVIEWS. See pages 63 to 80.

1. Review of map work on Asia. Emphasize the physical features, and make reference to variations in climate and surface conditions. (One day.) (See Bulletin No. V, pp. 28–29; 39–40; 48.)

I. **Southwestern Asia.** (Ch. XIX, pp. 251–254.)

1. Palestine, once the country of the Jews, now belongs to Turkey. It is a land rich in its religious associations. (Two days.)

Refs.—Wade, Our Little Jewish Cousin. (Parts.)
Miller, Little People of Asia, pp. 60–98.
Knox, Egypt and the Holy Land, pp. 24–29.
Smith, Life in Asia, pp. 287–310.

Suggestions.—Visit Palestine and see the Holy City of the Christians, with its queer houses and narrow, winding streets, the many different kinds of people, the limestone wall surrounding the city, the Mosque of Omar, the Church of the Holy Sepulchre, the Mount of Olives, the country, which is rocky and barren in places, while in others it is very fertile.

2. Mecca is the Holy City of the Mohammendans. (One day.)

Refs.—Carpenter, Asia, pp. 375–381.
Knox, Egypt and the Holy Land, pp. 17–20.

Suggestions.—Visit Mecca, the birthplace of Mohammed. Many followers of him visit here as a part of their religion. Notice the great Mohammedan temple in which we see the famous black stone. Call attention to the sandy region with its rocky hills. Mecca is said to be the hottest city in the world.

3. In Arabia many of the people are nomads scattered among the oases of the desert. (One day.)

Refs.—Carpenter, Asia, pp. 273–282.
Allen, Children of the Palm Lands, pp. 115–134.
Smith, Life in Asia, pp. 273–286.
Andrews, Seven Little Sisters, pp. 23–42.
Andrews, Each and All, pp. 57–90.

Suggestions.—This is a dry region, where it rains but little and water must be bought. Land at Aden and get an impression of the region and of this city. Notice the houses, and the streets. In the country notice the absence of rivers, the poor soil, the rocky deserts, the people who wander from place to place, live in tents, tend herds of camels and flocks of sheep, the fine horses, and here and there villages which are so dusty that they resemble dust heaps.

4. Coffee is the chief export of Arabia and Mocha is its shipping point. (One day.) (See 3.)

Refs.—Smith, Life in Asia, p. 276.
Carpenter, Asia, p. 273.

Suggestions.—Visit Mocha and the coffee plantations to see if coffee is cared for here the same as it is in South America. Ostrich feathers are also an important export.

5. Persia is famed for its fine rugs and shawls. (One day.)

Refs.—Carpenter, Asia, pp. 265–273.
Rupert, Geographical Reader, pp. 273–282.
Toward the Rising Sun, pp. 129–134.
Andrews, Ten Boys, pp. 25–47.
Smith, Life in Asia, pp. 253–269.
Miller, Little People of Asia, pp. 96–116.

Suggestions.—The main things to be emphasized under this topic are: the wandering tribes with their herds of goats, sheep and yaks, the caravans and their uses, the homes of the people, the wild animals such as lions, leopards and tigers, products such as wheat, barley and cotton, the walls around the cities, and the fine rugs and shawls.

II. **Siberia.** (Ch. XIX, pp. 254–255.)

1. Little has been done to develop Siberia. In the north are bleak tundras, and in the south are the wide, semi-arid steppes. The rich central portion has a scattered population. (Two days.)

Refs.—Smith, Life in Asia, Ch. XXII.
Kennan, Tent Life in Siberia. (Parts.)
Knox, Russian Empire, Chs. XIV, XV, XX.

Suggestions.—Point out the different regions, such as the tundras and the steppes. The cold tundras and their inhabitants, consisting of the wandering tribes and their herds of reindeer are noteworthy. In the southern part notice the products, such as wheat. The houses are very poorly built affairs. Tell the reason for this.

2. Siberia belongs to Russia and many Russians have been exiled to Siberia for opposing the harsh government of the Czar. (One day.)

Refs.—Kennan, Tent Life in Siberia. (Parts.)
Wade, Our Little Russian Cousin. (Parts.)
George, Little Journeys to Russia. (Parts.)
Miller, Little People of Asia, pp. 262–280.
Smith, Life in Asia, pp. 241–252.

Suggestions.—The line of men and women, bound in chains, working in the coal and iron mines day after day, contracting colds, many dying from exposure or tubercular trouble, as a punishment for crimes either real or imaginary. Oppression of the government has much to do with the crimes.

III. **The Chinese Empire and Korea.** (Ch. XIX, pp. 255–256.)

1. Long ago China had an advanced civilization. (One day.)

Refs.—Pratt, China, pp. 22–25; 30; 75–77.
Carpenter, Asia, pp. 128–134; 141–143.
Knox, Japan and China, pp. 385–387.
Smith, Life in Asia, pp. 162–165; 178–179.
Lee, When I Was a Boy in China, pp. 63–71.
Toward the Rising Sun, pp. 16–28.

Suggestions.—Point out the fact that China was an extremely old nation at the time America was discovered. It dates back over four thousand years. They knew how to print, make gunpowder and fireworks hundreds of years ago. At one time it was the most advanced nation on the earth.

2. Many curious old customs and beliefs are found in China. (One day.)

Refs.—Pratt, Stories of China, pp. 126–131; 160–165.
Smith, Life in Asia, pp. 163–165.
Carpenter, Asia, pp. 123–125.
Lee, When I Was a Boy in China, pp. 18–21.

Suggestions.—Among the things to be noted are, ancestor worship, feeding the departed spirits, the worshipping of idols, old style schools, methods of traveling; and many others if time will permit.

3. Tea raising is an important pursuit in China. (One day.)

Refs.—Chamberlain, How We Are Fed, pp. 70–76.
Andrews, Seven Little Sisters, pp. 61–63; 69–70.
Carpenter, Asia, pp. 66–67; 148–152; 200.
Smith, Life in Asia, pp. 151–156.
Pratt, China, pp. 51–60.
Andrews, Each and All, pp. 91–95.
Kirby, Aunt Martha's Corner Cupboard, pp. 14–60; 121–134.

Suggestions.—Visit a tea plantation and see how the plants grow, how they are cared for, how the leaves are gathered, cured and packed for shipment.

4. Most of the people have a hard time to make a living. In many parts of the country the population is very dense, thousands of people live in boats. (One day.)

Refs.—Pratt, China, pp. 42–47; 67–74; 85–89; 91–98.
Andrews, Seven Little Sisters, pp. 57–70.
Carpenter, Asia, pp. 105–107; 111–120; 134–141; 143–145.
Smith, Life in Asia, pp. 144–145; 158–160.

Suggestions.—Show pictures of the houseboats and describe the life on them. Speak of the small wages, such as eight cents per day for a coal miner, or one cent for carrying four hundred pounds of coal a distance of

one and a half miles, or five to six dollars a year and board for a farm hand. Notice that the chief foods of the people are rice and millet. Show the density of population.

5. Korea, formerly known as the Hermit Kingdom, now belongs to Japan. It is an unprogressive region with a squalid population and many strange customs. (One day.)

Refs.—Carpenter, Asia, pp. 76–92.
Toward the Rising Sun, pp. 53–56.
Smith, Life in Asia, pp. 232–241.

Suggestions.—Speak of the fact that these people tried to prevent outsiders coming into their country, and what some of the results have been. Coal and gold mines, the lack of temples and palaces, narrow streets in the cities, are points to be emphasized. Japan is doing much to improve this region.

IV. **Japan.** (Ch. XIX, pp. 257–258.)

1. Japan is an island kingdom. Its principal products are rice, tea and silk. (Two days.)

Refs.—George, Little Journeys to China and Japan. (Parts.)
Smith, Life in Asia, p. 185.
Carpenter, Asia, pp. 15–19; 59–75.
Wade, Our Little Japanese Cousin. (Parts.)
Miller, Little People of Asia, pp. 360–405.

Suggestions.—Visit the agricultural region and watch them cultivate these different products. Compare them with like industries in the other countries we have studied. Notice that there are no barns and no fences. Call attention to the volcanoes and speak of the earthquakes that have visited the region. There are many streams on the islands. Notice the different kinds of climate in the different parts of the empire.

2. Japan is full of strange sights of interest to the tourist. (One day.)

Refs.—Toward the Rising Sun, pp. 57–77.
Smith, The World and Its People, pp. 191–232.
Chamberlain, How We Travel, pp. 55–72.
Carpenter, Asia, pp. 24–33.

Suggestions.—The things worthy of notice are: natural scenery; Fusiyama, the sacred mountain; the Emperor's palace; the homes and furnishings; temples of worship; mode of dress; manners; cleanliness; religions.

3. The Japanese are an artistic people with marked skill in many kinds of handiwork. Their nation has recently made remarkable progress in civilization. (One day.)

Refs.—George, Little Journeys to China and Japan. (Parts.)
Smith, Life in Asia, pp. 181–183; 187.
Toward the Rising Sun, pp. 57–76.

Suggestions.—Under this topic should be included a discussion of the following: railroads; telegraph lines; schools; cotton mills; sawmills; matting factories; toy shops and factories; the home decorations.

V. **India and Siam.** (Ch. XIX, pp. 258–260.)

1. The Himalaya Mountains in northern India form the highest mountain system in the world. (One day.)

Refs.—Smith, Life in Asia, pp. 18–32.
Carpenter, Asia, pp. 209–217; 225–233; 249–256.
Knox, Ceylon and India, pp. 419–430.
Miller, Little People of Asia, pp. 130–188; 223–261.

Suggestions.—Take a general view of the surface of India by locating the mountains, valleys, plains, plateaus, and the rivers. It is governed, primarily, by Great Britain. Railroads, schools, and the postal system have been introduced by Great Britain. Visit the mountains and plateaus, notice their great height, the snow line, the timber line, and the inhabitants of the plateaus.

2. Most of the people of India live by farming and are very poor. Famine and plague sometimes destroy thousands of lives. (One day.)

Refs.—Smith, Life in Asia, p. 23.
Carpenter, Asia, pp. 206–208.

Suggestions.—Visit Calcutta, notice the curious houses, wide streets, the dresses of the people. Take a journey through the country, noting the density of population, the richness of the land, the character of the dwellings, and endeavor to tell why the people are so poor. Explain the causes of the famines and the plagues. Notice the methods of farming and compare with *our* methods. Some of the products are flax, linseed oil, opium, indigo and wheat.

3. The rajahs, or native princes, live in royal style in splendid palaces, with a retinue of servants. (One day.)

Refs.—Wade, Our Little Siamese Cousin.
Pratt, Stories of India, pp. 12–50.
Toward the Rising Sun, pp. 9–15.
Knox; Siam and Java, pp. 119–130.

Suggestions.—Call on one of these native princes and see how he lives. Notice his native city, the streets, the people, the elephants, the camels, the street sprinkler and the palace.

4. Benares is the Holy City of the Hindoos. (One day.)

Refs.—By Land and Sea, pp. 173–177.
Carpenter, Asia, pp. 57–59; 234–240.
Smith, Life in Asia, pp. 39–42.

Suggestions.—Visit this city and see the people bathing in the Ganges River, the crowds visiting the city, the temples, and the sacred cows. Speak of the many religions and the caste system.

5. The elephant is tamed and made to work in India. Tigers and deadly cobras are found in the dense tropical jungles. (Three days.)

Refs.—Kipling, Jungle Book. (Parts.)
Carpenter, Asia, pp. 195–197; 225–233.

Suggestions.—Study some of the wild animals, such as the tigers, panthers, wolves, rhinoceroses, and crocodiles. Visit the snake charmers.

Watch the elephants at the various kinds of work, such as carrying logs and piling lumber. Watch them take their baths.

6. Ceylon, a tropical island south of India, is famous for its tea. (One day.)

Refs.—Peeps at Many Lands—Ceylon, pp. 55–58.
Smith, Life in Asia, pp. 105–114.

Suggestions.—Notice the following: valuable woods in the forests and jungles; the mountainous region; many streams; banana and breadfruit trees; queer native boats; the two-wheeled carts; the native dwellings; the two castes; cinnamon groves; cocoa palms; rice fields, the Temple of the Tooth; the plantations of tea.

*7. Siam is an unprogressive country southeast of India. It is called the land of the white elephants. (One day.)

Ref.—Wade, Our Little Siamese Cousin. (Parts.)

Suggestions.—The things worthy of note are: the wild animals; queer people; many rivers; houses built on posts; the houseboats; tropical forests; the dress of the people; the food of the people; betel nut chewers; the universal habit of smoking.

Map Drill.—Give a map review of the continent of Asia. (See Bulletin No. V, pp. 28–29; 39–40; 48.)

XX. THE DARK CONTINENT. (Ch. XX, pp. 263–264.)

Map Drill.—Give a complete map drill on Africa. (See Bulletin No. V, pp. 26–27; 38; 47.)

Give your reviews each day. See pages 63 to 80.

1. Africa is the wildest and least developed of all the continents. Most of it is desert and jungle. (One day.)

Ref.—Carpenter, Africa, pp. 9–14.

Suggestions.—Take a general view of the continent, noting particularly the following: regular coast line; mountainous border; lowlands along the coast; large rivers with great waterfalls; the desert regions; the grassy plains; the dense jungles.

I. Northern Africa. (Ch. XX, pp. 264–268.)

1. Egypt was once a great country. The pyramids and many ruins of great temples tell us something of its strange past. (Two days.)

Refs.—Badlam, Views in Africa, pp. 500; 505.
Under Sunny Skies, pp. 108–113.
Carpenter, Africa, pp. 103–108; 87–92.

Suggestions.—Speak of the age of the nation; visit the pyramids and tell why they were built, visit the Sphinx, the other ancient monuments, the obelisk on the site of Heliopolis, the mummies, Alexandria the ancient seat of learning.

2. Cairo, the capital of Egypt, is interesting because of its narrow streets, curious houses, bazaars, camels, and water carriers. It is a typical Mohammedan city. (One day.)

Ref.—Carpenter, Africa, pp. 93–102.

Suggestions.—Notice particularly the things mentioned above; visit Pompey's pillar; give something of the history of the city; notice the queer crowds and the many colors and costumes.

3. The Nile Valley is one of the richest farming regions of the earth. (One day.)

Refs.—Carpenter, Africa, pp. 81–92.
Badlam, Views in Africa, pp. 500–505; 516–544.
Knox, Egypt and the Holy Land, pp. 97–132; 205–225.

Suggestions.—Notice the rich soil along the river and how the land is enriched; how the crops are irrigated from the Nile River; the desert on either side of the river; the Nile delta; lack of rain; the Assuan dam.

4. The Sahara is the greatest desert in the world. Caravans pass over it with difficulty. (Two days.)

Refs.—Carpenter, Africa, pp. 55–74.
Badlam, Views in Africa, pp. 19–29; 366–388; 496–500.
Under Sunny Skies, pp. 108–113.

Suggestions.—It would be interesting to imagine yourselves taking a journey across the desert, noting the following: the camels, and how they drink before leaving the watering place; the heat; the rocks and sand hills; dry rivers and valleys; scanty vegetation or none at all; the oases; sandstorms; hot, dry air; night traveling; the people who live on the desert.

5. The Barbary States were once the home of fierce pirates. Morocco is still infested with brigands. (Two days.)

Refs.—Carpenter, Africa, pp. 14–55.
Rupert, Geographical Reader, pp. 340–341.
Knox, Levant, Chs. I–IX; XI–XIV.

Suggestions.—The chief points to be kept in mind here are: Atlas Mountains; the forests; the different kinds of people, such as the Berbers and the Moors; date palms; the square, flat houses; water carriers and street sprinklers; the schools; the market places; the wild tribes of the interior; fig orchards; fields of corn, wheat and barley; the pirates of the past.

II. **Central Africa.** (Ch. XX, pp. 268–269.)

1. Livingstone and Stanley first explored the swamps, forests and jungles of Central Africa. They faced many dangers from the hardships of the country and from savage beasts and men. (Two days.)

Refs.—Jenks, Boys' Book of Exploration, pp. 84–333.
Badlam, Views in Africa, pp. 93–156.
Wade, Our Little African Cousin, pp. 388–451.
Muller, The Story of Akimakoo. (Parts.)
Carpenter, Africa, pp. 222–241.

Suggestions.—Study about the adventures of Stanley and Livingstone. Notice the mighty rivers, the numerous large lakes, the falls and cataracts, the Kongo basin, and the dense forests.

2. Central Africa is the home of savage tribes and ferocious animals. Ivory is its important export. (Two days.)

Refs.—Wade, Our Little African Cousin, pp. 31–89.
Carpenter, Africa, pp. 144–190.

Suggestions.—Visit some of these people and notice their habits, customs, and surroundings. Notice how they protect themselves from animals more ferocious than themselves. The fever-laden swamps and jungles are the homes of these animals. Notice how the natives obtain the ivory which they sell to the traders. Visit the queer little pygmies.

3. From Africa have come the negroes, once taken to America as slaves. The Arabs still keep up a trade in negro slaves. (One day.)

Refs.—Carpenter, Africa, pp. 191–199.
Wade, Our Little African Cousin. (Parts.)

Suggestions.—Visit the region from which the greater number of slaves were brought to America. Notice how they live there, their fondness for jewelry, the witch doctor, the mission schools, and the colonies where many descendants of negro slaves are living.

III. **Southern Africa.** (Ch. XX, pp. 269–270.)

1. Much of South Africa is owned by England. Diamond mining and ostrich raising are carried on. (Two days.)

Refs.—Carpenter, Africa, pp. 273–332.
Chamberlain, How We Are Fed, pp. 226–229.
Badlam, Views in Africa, pp. 166–180; 197–207.

Suggestions.—Visit the diamond mines and notice the kind of a region they are in, notice how the stones are gotten from the earth, what they look like and how the mine owners keep the miners from stealing them. Tell something about diamond cutting. Visit the ostrich farm and see how the birds are kept, how the feathers are obtained and made ready for the market. (See Fig. 220, State Series Introductory Geography.)

Map Drill.—Give a map drill on Africa by way of a review. (See Bulletin No. V, pp. 26, 38, 47.)

XXI. AUSTRALIA, EAST INDIES AND PACIFIC ISLANDS. (Ch. XXI.)

General Introduction:

1. Review map work on Australia and islands of the Pacific. (One day.) (See Bulletin No. V, pp. 27, 39, 47.)

2. The South Pacific contains many islands, some large and some small. The nations of Europe possess most of these islands, and but little has been done to develop them, except Australia and New Zealand. Many of them are still the home of savage races. (Two days.)

Do not neglect the daily review. See pages 63 to 80.

I. **Australia.** (Ch. XXI, pp. 271–274.)

1. At first Australia was used by England as a place for convicts. Now it has grown into a rich colony. (Three days.)

Ref.—Carpenter, Australia, pp. 13–16.

Suggestions.—Something should be said as to the size of Australia, its continental border, the short rivers, and the desert interior. The early settlers were criminals who worked in chains. Colonies were established later. The rains come from the eastward. Cattle, sheep, and wheat are important products of this continent. Notice the brackish lakes on the interior. Gold is an important mineral.

2. Australia is the native home of strange plants and animals, such as the acacia, eucalyptus, kangaroo and duckbill. (One day.)

Refs.—Ballou, Footprints of Travel, pp. 63–65.
Carpenter, Australia, pp. 391–430.
Knox, The Land of the Kangaroo, pp. 49–66; 83–99; 115; 30; 146–157; 218–232.

Suggestions.—In addition to the above there are many other strange animals. Visit some of the natives, notice how they live and what they look like. Visit the pearl fisheries and the Great Barrier Reef.

II. **The East Indies.** (Ch. XXI, pp. 274–275.)

1. Here are the rich spice islands sought by Columbus. They are the home of wild races. (One day.)

Refs.—Wade, Our Little Brown Cousin. (Parts.)
Toward the Rising Sun, pp. 115–128.
Knox, Siam and Java, pp. 387–393; 411–421.
Carpenter, Australia, pp. 73–126.

Suggestions.—Visit Java and notice where the famous Java coffee is grown. Visit New Zealand, where there are many evergreen plants, where there are glaciers, pastures for sheep, and hot springs containing various mineral substances. Visit New Guinea, where you will see the high mountains, great rivers, low plains, dense forests, and the queer-looking natives. Samoa will be of interest also.

III. **Philippines.** (Ch. XXI, pp. 275–276.)

1. Spain possessed these islands for many years, but now they belong to the United States. (One day.)

Refs.—George, Little Journeys to Hawaii and the Philippines, pp. 15–16; Part II, pp. 1–88.
Greater America, pp. 67–84; 108–119.
Carpenter, Australia, pp. 153–161.

Suggestions.—It will be interesting to take, briefly, the history of these islands and somewhat of a general view of the different tribes found on them. Notice how they cultivate rice and other products, and compare with what has been seen in other places.

2. Most of the natives of the Philippines are savages, but near the the coast and the cities they have a rude civilization. (One day.)

Ref.—Carpenter, Australia, pp. 158–161.

Suggestions.—Study the habits, customs, and surroundings of some of the natives where they have had some contact with civilization. Try to find out what effect such influences have had upon them.

3. Manila is the capital. It is a busy city, with many queer sights. Its climate is hot and unhealthful. (One day.)

Refs.—Carpenter, Australia, pp. 161–177.
McClintock, The Philippines, pp. 90–96.
George, Little Journeys to Hawaii and the Philippines, pp. 17; 21–48.

Suggestions.—Visit Manila and notice the following: the streets; the houses; the walled city; the Escolta; the Luneta; the fruit market; the Palace; the homes of the American residents; the climate.

IV. **Islands of the Pacific.** (Ch. XXI, p. 276.)

1. The Hawaiian Islands belong to the United States. Here the climate is delightful all the year round, and tropical fruits are raised in abundance. (Two days.)

Refs.—Wade, Our Little Hawaiian Cousin, pp. 17–25.
George, Little Journeys to Hawaii and the Philippines, pp. 1–87.
Kirby, Aunt Martha's Corner Cupboard, pp. 61–75.

Suggestions.—Notice the location of these islands, the warm moist climate where it rains very often, the tropical fruits such as pineapples and bananas, such products as coffee and sugar cane, the luxuriant vegetation, the houses of the natives, poi, and how it is made. See the sights of the city of Honolulu.

2. Kilauea, the volcano, is one of the well known features of the islands. So, also, is the leper colony. (One day.)

Refs.—George, Little Journeys to Hawaii and the Philippines, pp. 65–70.
Wade, Our Little Hawaiian Cousin, pp. 85–99.

Suggestions.—Visit Kilauea, where you will see the hot lava in the immense crater, the cooled lava on the mountain slopes, and breathe the sulphur laden gases from the numerous vents on the mountain. It will be interesting to take a trip to the leper colony and see how those poor, unfortunate people are cared for.

XXII. **California.** (Ch. XXII, pp. 285–319.)

CONTINUE THE DAILY REVIEW. See pages 63 to 80.

1. Physiography and drainage. (One day.)

California consists mainly of a broad valley bordered on all sides by mountains. It is drained by the Sacramento-San Joaquin River system. South of the great valley lie the plains of Los Angeles.

Refs.—Fairbanks, Geography of California, pp. 3–15; 24–30.
Smith, Our Own Country, pp. 205–217.

Suggestions.—Study the mountains, valleys and rivers from the relief map of California (see Fig. 229, opposite page 282), so as to get an idea of the relation of these parts to each other. Notice the great valley, particularly with its river systems. The chief points should be the great area occupied by mountains as compared to the valley area, the Sierra Nevada, Cascade, and Coast Range Mountains, the San Francisco Bay, and the plains of Los Angeles.

2. Climate. (One day.)

Our State is noted for its great variety of climates. Abundant rainfall is furnished by the storms from the Pacific Ocean.

Refs.—Fairbanks, Geography of California, pp. 16–23.
Allen, Industrial Studies, pp. 87–88.

Suggestions.—Take typical regions and study briefly the climate of each and compare with the other regions. Take such as your home region and other representative places which are included in the following: the Great Valley; Coast; High Sierras; Foothills; Los Angeles Plains; the Mojave Desert Region.

3. Industries. (Five days.)

This is a State of varied industries. Fruit, cattle, sheep, and grain are important.

Refs.—Fairbanks, Geography of California, pp. 30–40; 50–54; 57–58.
Allen, Industrial Studies, pp. 84; 86; 89; 91–103; 109; 116; 270–272.
Carpenter, North America, pp. 265–270.

Suggestions.—Study the chief fruit industry of your neighborhood and also the other representative industries. The work should include such fruits as grapes, olives, oranges, lemons, prunes, peaches; such cereals as wheat and rice; such other products as cotton, onions and potatoes. Many of these will require but a short time, so that greater emphasis should be placed upon those of most importance. *Your own neighborhood is first in importance.* Comparisons with other regions and countries will be of great value.

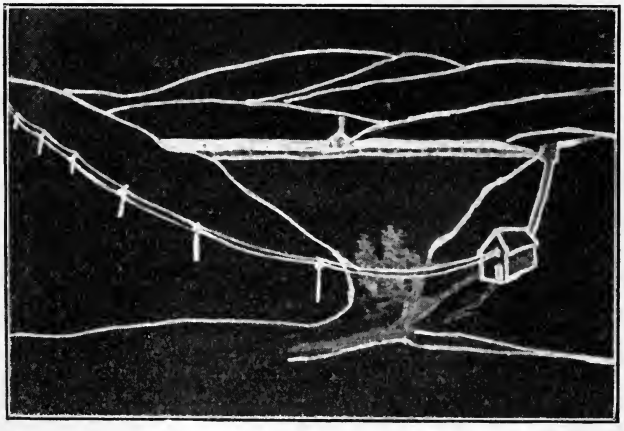

FIG. 5.—An electric power plant.

4. Manufacturing and mining. (Three days.)

Various factories find a ready market for their products, and gold and copper mining are important. Oil is a very important product.

Refs.—Fairbanks, Geography of California, pp. 40–46.
Allen, Industrial Studies, pp. 195–200.

Suggestions.—Gold and copper being the most important ore products should be given particular stress. Oil being the most important mineral product should be given a liberal amount of time. Visit the oil wells and

see how the oil is obtained and taken care of. The chief factories are those for the manufacture of lumber, iron products, sugar refineries, oil refineries, powder works, and wineries. (See Figs. 250 and 252 in the State Series Introductory Geography.)

5. Commerce and cities. (Five days.)

Extensive trade is carried on with the Orient through the Bay cities. Los Angeles, San Diego, and Pasadena are among the important cities of southern California. Sacramento is our capital city.

Suggestions.—Study the cities of San Francisco, San Diego, Pasadena, and Oakland for the purpose of learning what they have to ship out, and what must be brought in. The Bay cities will also show a large amount of shipping that passes through between the United States in general and the Orient. Over $46,000,000 worth of goods came into San Francisco from foreign ports during the year June 30, 1908, to June 30, 1909, and about $33,000,000 worth sent out during the same time.

REVIEWS.

No matter how well a topic may have been presented, when first taken up in class, it is not properly taught till it has been reviewed and re-reviewed so that the class has the important points well in hand. The fact that a portion of the text was covered in a lower grade is no excuse for neglecting it entirely. If it was worth presenting at all some parts of it are worth remembering and the teacher who does her duty by her class will insist that they review often enough to keep the main points in mind.

What follows is an outline indicating the most important facts for these two grades and the ones which the child should know when he has completed the State Series Introductory Geography. The topics, headings and numbering of the following sections are those used in the State Series Introductory Geography and will serve as a means of ready reference for the teacher in using the review in connection with the text. To this outline, the teacher can attach the associations necessary to render the review crisp and inviting. She should remember, also, that rational association of review material is as valuable in forming permanent impressions as it is in the case of new material.

Perhaps the best way to use the review is to begin with the first topic, within two weeks after the class has taken it in the text, and give a certain amount of time to this work each day. The first day the class will review a small portion, the next day they will begin where they left off the day before and so on till they reach the part of the review corresponding to the point at which they are in the text-book. They then return to the beginning and proceed as before. This is continued throughout the two grades, a little each day, until the teacher is certain that it is no longer necessary to review a certain portion of the work because the class know it perfectly. This portion may then be dropped, to be taken up less often thereafter.

HOME GEOGRAPHY.

I. THE SOILS.

The solid rock which was once all over the earth's surface has been broken up and formed into soil in many places. Plants growing into it, water stealing into cracks, rocks grinding together, and even earthworms aid in breaking the large rocks into small bits. Most animals, plants and even people live upon things gotten from the soil. Rich, fertile soil produces fine crops because it contains food for the plants. We may change sterile soil into fertile soil by adding the materials that plants live on. Plants do not grow well upon sterile soil because they do not get much food from it.

II. HILLS.

Where the soil has been worn away, leaving an uneven surface, hills have been formed. Some have gentle slopes while others are quite steep. People like to build their homes on hills where it is dry and healthful.

III. MOUNTAINS.

Mountains are much like hills only they are much larger and have but little soil upon them. They were made by the wrinkling of the earth's surface. Some mountains are so high they have snow on them all summer. They are cooler in summer than the valleys are and many people move to the mountains to rest during the hot weather. Many trees, from which we get our lumber, grow in the mountains. The mountains also contain beautiful streams and waterfalls.

IV. VALLEYS.

The lowland between hills and mountains we call valleys. Here we find fertile soil through which flow streams of water. Most people live in the valleys because of the rich soil there. Wagon roads and railways usually follow the valleys. Some places, where the land is nearly level, the water collects, forming swamps.

V. RIVERS.

When the rain falls upon the sides of the mountain, part of the water sinks into the ground and part of it begins to collect into little rivulets and flow down the slope. These little streams unite to form larger ones and finally unite to form a river. The river carries much sediment, which may be deposited either along the stream or at its mouth. Much of the water is used to irrigate the land in the valleys. Steamers may sail up the larger rivers. At its source a river is swift and contains many falls and rapids, but it flows slower and slower as it gets nearer its mouth.

VI. PONDS AND LAKES.

If we were to build a dam across a creek or a river the water would gradually get deeper and deeper, thus forming a pond. A very large pond is usually called a lake. Lakes are generally formed by the water running into a low place and filling it. Sometimes the earth folds across a river, forming a dam. The part above the dam then fills up with water, forming a lake. Lakes that have no streams flowing out of them soon become salty.

The water of the fresh water lakes is often used to drink, but wells usually furnish better water. Fish are found in most lakes. Some lakes are so large that vessels sail upon them.

VII. THE OCEAN.

Just think of a pond or lake growing larger and larger until it is hundreds or even thousands of miles across. It then becomes an ocean. All of the large rivers flow into the ocean, but never make it run over. Hundreds of large ships sail over the ocean.

VIII. THE AIR.

The substance that we breathe and move around in is called air. Even if we were to climb to the top of a high mountain we would find plenty of air to breathe. When the air moves from one place to another it causes winds. This may cause the ships to move over the water or the windmills to turn on the land. The air is also important to us because it carries the moisture to us from the ocean. This moisture forms into little drops of water and makes clouds. Then when the drops become large enough they fall to the earth as rain.

IX. INDUSTRY AND COMMERCE.

Some people are busy at one kind of work and some at another. For instance, one man may be a farmer, another a carpenter, still another a railroad engineer, and so on. If the farmer has more wheat than he can use he may send some of it away on the railroad. The engineer drives the engine that takes it. When the train comes back it may bring the farmer some sugar, a plow, or a wagon. Sometimes things are sent from one place to another on mules or on wagons or on ships. This sending things from one place to another and bringing things back we call commerce.

X. GOVERNMENT.

Some one must look after us all so that we may be happy and have things of our own. In the home our parents look after us, in the school the teacher watches us and helps us, and outside of the home and school are policemen who keep us and our neighbors from harm.

XI. MAPS.

When we wish to represent a part of the earth so that some one else may know what we are talking about we draw a picture or a map of it. It is much smaller than the part of the earth it is taken from.

PART II.

THE EARTH AS A WHOLE.

I. FORM AND SIZE OF THE EARTH.

Form.—For many years people thought that the earth was flat, but we know now that it is round like an orange.

Size.—The mountains seem high to us, but they are very small when compared to the earth as a whole. Can you imagine how far 8,000 miles is? This is the distance through the earth. (Compare it with some distance they know locally.) It is about 25,000 miles around it.

II. DAILY MOTIONS OF THE EARTH AND ITS RESULTS.

The Axis and Poles.—The line upon which the earth turns passes through the center of the earth. Where it reaches the surface of the earth we call the poles. The one north of us is the *north* pole, the one south of us is the *south* pole.

Equator.—An imaginary line drawn around the earth halfway between the two poles forms the *equator*.

Gravity.—All things are drawn toward the earth by what we call the *force of gravity*. This force keeps all things from flying away from the earth. It pulls us down all of the time.

Sunrise and Sunset.—The earth turning on its axis from west to east makes it appear as if the sun rose in the east and set in the west.

Day and Night.—When the earth is turned so that the side we are on is toward the sun we have day, and when the side we are on is turned away from the sun we have night. When we have day, then, people on the other side of the earth will have night.

III. THE ZONES.

Boundaries of the Zones.—The *torrid*, or hot, zone of the earth lies between the tropic of Cancer on the north and the tropic of Capricorn on the south. Between the tropic of Cancer and the Arctic Circle lies the north temperate zone. The south temperate zone lies between the tropic of Capricorn and the Antarctic Circle. Within the Arctic Circle is the north frigid zone, while the south frigid zone lies inside of the Antarctic Circle.

Torrid Zone.—The part of the earth lying on either side of the equator and which at some time during the year has the noonday sun vertically overhead is called the *torrid* or *tropical zone*. It is sometimes called the equatorial belt.

Temperate Zones.—North of the torrid zone is the north temperate zone. This region never has vertical rays of the sun at noonday. The sun is always to the south of us. South of the torrid zone is the south temperate zone, where the noonday sun is always to the north.

Frigid Zones.—Around the poles are the frigid zones. Here the sun shines only slantingly. The one around the north pole is the north frigid zone and the one around the south pole is the south frigid zone.

VII. NORTH AMERICA.

Physical Geography.—On the west we find the Rocky Mountain, Sierra Nevada and Coast Range region, and on the east the Appalachian Mountains. The Mississippi Valley lies between the Rockies and the Appalachian Mountains. East of the Appalachian Mountains is the Atlantic Slope. West of the Rocky Mountains is the Pacific Slope. The great rivers of North America are the Mississippi, Missouri, St. Lawrence and the Yukon.

Political Divisions.—The continent of North America is made up of the following man-made divisions: United States, and Alaska; Canada; Mexico; Central America.

VIII. THE UNITED STATES.

From the thirteen original colonies the United States has grown to forty-eight states and the territories of Alaska, Hawaii, Porto Rico, and the Philippine Islands.

IX. NEW ENGLAND.

Names.—Many of the names in this section, which includes Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, are the same as those in England with the word *"New"* added.

Seaports.—The irregular coast line furnishes good harbors. Boston, Portland, Gloucester and Providence are seaports of importance. Gloucester is a large fishing port.

Farming.—The thin, rocky soil is of little value for farming purposes. Near large cities are small farms producing vegetables, milk, butter, and other farm products.

Quarrying of granite and marble is an important industry.

Lumbering.—The mountains of northern Maine produce much valuable lumber. The logs are floated down streams to where the steamers can load the lumber when sawed. Bangor is a large city as a result of the lumber industry.

Manufacturing.—Because of the great amount of water power furnished by the rivers the New England States contain many important manufacturing cities. Cotton and woolen goods, boots, shoes, knives, guns, watches and many other common articles are made in the larger cities.

Commerce.—Food, cotton, wool and hides are brought into these states and the manufactured articles are shipped to all parts of the United States as well as to foreign countries. Much of the shipping goes through Boston, Portland, and Providence, thus helping to make them large cities.

X. MIDDLE ATLANTIC STATES.

This group of states is made up of New York, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia and Virginia.

The Coast Line.—The sinking of the coast line has made it irregular and formed the Chesapeake, Delaware and New York bays.

Seaports.—New York, situated on New York Bay, is the largest city in the United States, and the second largest city in the world. Philadelphia is located on the Delaware River, but can be reached by large vessels. Baltimore is on the Chesapeake Bay.

Reasons for the Great Size of New York City.

Cities Near By.—There were many smaller cities near New York, but they are now a part of it and together form Greater New York. Many vessels come to New York harbor from all parts of the civilized world.

Water Routes to the Interior.—From New York Bay vessels may sail up the Hudson River as far as Albany. From here smaller boats go by way of the Erie canal to Buffalo on Lake Erie.

Many important railroad routes reach out from New York and compete with the water routes to the interior.

Lumbering.—This is an important industry along the Mohawk River.

Farming.—The rich soil of the more level portions of New York State make it valuable for farming purposes. Hay, grain, fruit, butter and cheese are the chief products.

Manufacturing.—The falls in the rivers are generally used for power purposes. Such cities as Rochester, Buffalo and Troy are the chief ones using this power. New York City uses steam power for its factories.

Commerce.—The manufactured articles and some of the farm products are shipped out through New York City. Much trade comes by way of the Erie canal from the Great Lakes. Large quantities of goods are brought into the United States, from foreign countries, through this port.

Reasons Why Philadelphia is a Great City.

Cities Near By.—Camden, Trenton and Wilmington are quite large neighboring cities.

Farming.—Fruit and grain are grown quite extensively near Philadelphia and also in the mountain valleys. Lumbering is carried on to some extent in the mountains.

Iron.—A great amount of iron ore is found in Pennsylvania. Much of it is smelted and made into useful articles such as stoves, engines and

knives. Several large cities in this State, besides Philadelphia, are noted for the manufacture of iron goods.

Coal.—Great quantities of coal are found in this State. Much of it is used to melt the iron and the iron ore, while a great deal of it is used to cook with and warm the houses in winter.

Oil and gas.—Petroleum and gas are found in quite large quantities.

Commerce.—Many materials are sent to Philadelphia to be manufactured into useful articles, while others are sent there to be shipped to other places.

Other Cities.

Baltimore.—This city has an excellent harbor and is also noted for its fine oysters.

Washington.—Washington is the capital of the United States. Here are the government buildings in which are thousands of men and women attending to the business of our country.

Virginia and West Virginia.—The mountainous western portion of Virginia and the eastern part of West Virginia furnish lumber and iron. West Virginia furnishes oil, coal and gas. Virginia has a mild climate which is good for the growing of tobacco. Richmond, which is the most important city of these states, is a great tobacco market.

XI. SOUTHERN STATES.

In this group of states we find North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi, Louisiana, Arkansas, Oklahoma and Texas.

Relief.—The Appalachian Mountains pass across several of these states, but the greater part of this region is plains. Along the coast is the level strip called the Coastal Plain. The land along the Mississippi River is so low that it must be protected by levees. Between the mountains and the coastal plains are the plateaus.

Coal and Iron.—Coal and iron are found in the mountains. Birmingham has quite large iron foundries.

Cotton.—The rich soil, warm, moist climate produce excellent crops of cotton, corn, wheat and tobacco. Cotton is the most important.

Ranching.—Cattle raising is the important industry of the drier plains of western Texas.

Sugar and Rice.—Along the low plains rice and sugar cane are grown. The sugar we use is made from this cane or from beets. Florida oranges, lemons and pineapples are well known and are of excellent quality. Much lumber is produced in these states.

Manufacturing.—Much cotton is manufactured, but a great deal is shipped to New England and Europe. Important steel and iron industries are found near the coal fields.

New Orleans.—This city, situated on the Mississippi River where it can be reached by ocean steamers, is the most important city in the south. Ships can also pass from here far up the river to interior regions. These things make New Orleans an important seaport. Immense quantities of cotton are shipped from here.

Other Seaports.—Other seaports of importance are Galveston, Mobile, Jacksonville, Savannah, Charleston, and Wilmington.

XII. CENTRAL STATES.

In this group we find Kentucky, Ohio, Indiana, Michigan, Illinois, Wisconsin, Missouri, Iowa, Minnesota, Kansas, Nebraska, and South Dakota.

Products.—With the exception of the two Dakotas, western Kansas and Nebraska, the fertile soil is well watered and produces large crops of corn and wheat. Tobacco is an important crop in Kentucky. Coal and petroleum are found in Ohio and Indiana, coal alone in Illinois, and iron and copper along the western shores of Lake Superior.

Manufacturing and Trade Centers.—The great cities of this region are on the Great Lakes and on the Mississippi River. Chicago, next to New York in size, is situated on Lake Michigan. It has water connection with New York and also down the St. Lawrence River. The Erie canal leads across New York State and a short canal carries the ships around the Niagara Falls. Chicago is a great railroad center, is the greatest meat market in the world, is an important grain market and, being near the Illinois coal fields, is of importance as a manufacturing city. Milwaukee and Minneapolis are important milling cities. The latter is located at the falls in the Mississippi River. Kansas City is noted as a meat packing center.

XIII. WESTERN STATES.

This group of states is composed of New Mexico, Arizona, Utah, Colorado, Wyoming, Montana, Idaho, Washington, Oregon, and California.

Reasons why there are so Few People.—These states consist of about one third of the entire area of the United States, but have about one fourth of the population of the Southern States. The main reasons for the few people are, (1) this region has not been settled long, (2) it is very mountainous, (3) has a dry climate in the greater part of it.

Wonderful Scenery.—The geysers and the Yellowstone River in the Yellowstone National Park, the Yosemite Valley in the Sierras and the Grand Canyon of the Colorado are visited by hundreds of tourists from all parts of the world.

Mining.—Gold is found quite plentifully in California, Colorado, Montana, Nevada and Utah. Copper is important in California and Montana. Large quantities of silver are produced in Colorado and Nevada. Denver is situated in an important mining region.

San Francisco, situated on one of the finest harbors in the world, is an important seaport. Portland and Seattle are also important seaports. Los Angeles is the center of a valuable fruit growing region.

The Desert.—Much of the land has so little moisture that scarcely anything is produced on it.

Irrigation.—Parts of these deserts have been made to yield good crops by irrigation. The region around Salt Lake City has been changed in this way. Large reservoirs are being built to store up water for irrigation purposes.

Fruit Raising.—Much of southern California, because of its warm climate, has been made to produce large crops of oranges and lemons. Los Angeles is the center of this belt and is an important railroad center.

Industries along the Pacific Coast.—In central and northern California the rainfall is more plentiful, so that irrigation is not so necessary. This region produces immense quantities of fruits, among which are grapes, peaches, prunes, cherries, oranges and apples. Lumbering and wheat raising are important industries. The famous "Big Trees" are in this section. Oregon and Washington have extensive forests from which large quantities of lumber are made. Fruit growing and salmon fishing are important industries.

Cities of the Pacific Slope.—There are several fair sized cities in this region, but all are smaller than those of the Atlantic coast in the same positions with regard to harbors, *i. e.*, such cities as New York, Philadelphia, Boston, and New Orleans.

XIV. ALASKA.

During recent years hundreds of men have gone to Alaska to dig for gold. Much gold has been taken from the earth as a result of this gold rush. The salmon fisheries, the seals, the forests and the coal deposits are of great value. This is a region of great glaciers.

XV. CANADA AND OTHER COUNTRIES NORTH OF THE UNITED STATES.

Canada and Newfoundland.

Industries.—Canada, Newfoundland and Labrador belong to Great Britain. In the north Canada is cold and bleak, but in the south it resembles the northern part of the United States. Off the coast of Nova Scotia and Newfoundland are important fisheries. Extensive forests of valuable timber cover much of Canada. In Manitoba are extensive wheat fields. Cattle and sheep raising are important along the foothills of the Rocky Mountains. Canada, like the United States, has the advantage of the Great Lakes for shipping purposes.

Cities.—Most of the important cities are in the eastern part. Montreal is the largest. Much manufacturing is done in eastern Canada, where there is much water power and coal.

The Far North.—This region is the home of a few hunters, trappers, and scattered groups of Eskimos along the coast.

Islands North of North America.—These islands are a desolate, frozen region given to the formation of glaciers and icebergs.

XVI. COUNTRIES SOUTH OF THE UNITED STATES.

Mexico and Central America.—The climate near the coast is warm and damp. This region produces cotton, sugar, rice and coffee. The plateau region is given over to stock raising, as it is more or less arid and cool. The rough, mountainous region is valuable for its minerals. People are ignorant and coal is lacking, so manufacturing is of little importance. Mexico and Central American countries are republics. They are frequently in a state of revolution. Panama is the center of interest because of the canal which we maintain across the Isthmus.

The West Indies and Bermudas.—Cuba, the largest of the West Indies, is a republic under the protection of the United States. We get sugar, tobacco and tropical fruits such as bananas from there. Porto Rico belongs to us. The other islands are of minor importance.

XVII. SOUTH AMERICA.

Relief.—The greater part of South America is lowland drained by the three great rivers, the Amazon, the Orinoco and the La Plata. On the western border are the lofty Andes Mountains.

Climate.—The greater part of South America lies in the torrid zone, therefore it has a warm, moist climate. The southern part has a temperate climate. The torrid zone has very heavy rainfall, while the south temperate zone has only a moderate amount. In parts of Chile and Peru the rainfall is very light.

History.—Most of South America, except Brazil, formerly belonged to Spain. Brazil belonged to Portugal. They are all independent now, except the Guianas.

Brazil.—Much of the Amazon Valley is covered with dense, matted forests which can be passed through with great difficulty. Only Indians live in such places. Rubber and cocoa trees are the most important in this region. Most of the inhabitants live along the eastern coast. Rio de Janeiro is the chief city and is situated on the most beautiful harbor in the world. Large herds of cattle are raised on the plateaus of eastern Brazil. Crops such as are usually grown in warm countries are produced here. Coffee is the principal one.

Venezuela and Guiana.—The broad, grassy plains, called llanos, feed numerous herds of cattle. Coffee and cocoa are raised here. Trinidad island, near the mouth of the Orinoco River, furnishes great quantities of asphalt.

La Plata Countries.—Argentina, Uruguay and Paraguay make up this group of countries. The grassy plains, or pampas, of this portion of South America are valuable for farming and stock raising. Corn and wheat are important farm products. In the northern part of this region, tobacco and sugar cane are grown. The country is well supplied with railroads. Buenos Aires is the largest city in South America. Argentina is one of the most progressive countries on this continent.

Andean Countries.—In this group we find Chile, Bolivia, Peru, Ecuador and Colombia. These mountainous countries contain valuable deposits of gold and silver. There are few good harbors along this coast. Valparaiso is the largest port. Farming is carried on in the northern section and also in the southern part. In the other portion it requires irrigation. Bolivia has no seacoast and as a result foreign commerce is not important. Much beautiful scenery is found in the high Andes Mountains.

XVIII. EUROPE.

Although about the size of the United States, Europe has five people to our one.

I. **The British Isles.**—We often speak of this as our "Mother Country," because the greater number of the first settlers in America came from here.

There are two large islands in this group, Ireland and Great Britain. The latter is made up of England, Scotland and Wales. London, the largest city in the world, is situated on the Thames River. It has a fine harbor.

The climate of England is the same as the northern part of the United States, due to the warm winds from the west. The occupations are farming, sheep raising and manufacturing. The latter is the most important. This is made possible by the large amount of coal and iron found in the earth. The chief cities engaged in manufacturing are Manchester, Sheffield, Birmingham and Glasgow. Glasgow is the greatest steel shipbuilding center in the world.

Ireland is principally an agricultural country, but Belfast is an important center for the manufacture of linen goods.

The British Empire is the greatest shipping nation in the world. Great Britain and Ireland, together with the colonies, form the British Empire.

II. **Norse Countries.**—Sweden and Norway occupy the Scandinavian peninsula. This region is warmed by the westerly winds so that some grain can be grown where it is not too hilly and rocky. Cattle and sheep are raised along the Baltic Sea. Most of the people live on the lowland along the coast. Norway has many deep, narrow bays which form excellent harbors. Fishing is an important industry.

Denmark is the home of a thrifty people who depend upon dairying, farming and fishing for a livelihood. Being almost surrounded by water they naturally lead a seafaring life.

III. **Russia.**—The Russian Empire consists of the great plains in Europe, and Siberia in Asia. It is the largest country in the world. The cold northern plains, called tundras, are frozen, except a few inches on the surface, during the entire summer. A sort of moss grows there which furnishes food for reindeer. The steppes of Siberia, being distant from the ocean, are quite dry. Many cattle and sheep are raised on the grassy portions of these plains. The central and western portions of Russia produce large crops of wheat. Much of this is milled in Odessa or exported from there. Russia has no seaport of importance on the Baltic Sea. The Volga is the largest river in Europe. The peasants are poor, ignorant and have little to say about the government.

IV. **Germany.**—Germany has great plains in the north and the highlands and mountains in the south. The rivers wind their way northward through the rich grain fields and fields of sugar beets. Grapes from which wine is made and hops used in making beer are grown in large quantities. Coal and iron are mined in large quantities and manufactured into various articles, such as machinery and guns. Germany is important for the manufacture of cotton, woolen and linen goods. It is also noted for its schools and universities. Berlin is the capital and Hamburg the chief seaport. The Rhine is the chief river of this country.

V. **Holland.**—Much of the land in this region is below the sea level and has been reclaimed by building dikes and canals, and pumping the water out by means of windmills. Cattle raising and dairying are the chief occupations of these people. The chief city is Amsterdam. The Hague is becoming known as the "peace city." Holland owns many valuable islands which her seafaring inhabitants have won for her.

VI. **Belgium.**—Some of this country is protected by dikes, but the eastern part is higher. This region has the densest population of any region in the world. The chief occupations are dairying and farming. Flax is an important farm product. Coal and iron are mined and manufactured into guns and various implements. Brussels is the capital and Antwerp the chief seaport.

VII. **France.**—The climate in the north is cool, so that the chief crops are grain and sugar beets. In the southern part it is warmer and great crops of grapes are grown and made into wine. Lyon, in the south, is the center of the silk industry. Paris, the largest city, is noted for its clean streets and its picture galleries. Havre is the chief seaport on the north and Marseilles is the most important one on the Mediterranean.

VII. **Spain and Portugal.**—Spain has a dry, mountainous interior which is of little value, and has few inhabitants. Madrid, the capital, is in this region. Cattle and sheep raising are important industries in the highlands. Minerals such as quicksilver, iron, copper and lead are quite abundant. Farming is carried on in the valleys and along the coast. Portugal is similar to Spain in products, surface and climate. The people are a care-free lot, who enjoy cock fighting and such amusements.

IX. **Italy.**—Rome once ruled the greater part of the world. Now it is noted for the ruins of years ago, and as the home of the Pope. Venice and Naples are cities of interest to the visitor. The climate is mild and many semitropical and tropical fruits are grown here. Mount Vesuvius is of great interest to tourists on account of its frequent activity. The farms of this region produce quite large quantities of wheat. Olives are an important product of this country. Many people go to Italy to study art.

X. **Switzerland.**—This is the region of the lofty snow-clad Alps, with many glaciers and beautiful lakes. Cattle and goats are raised to some extent, so that butter and cheese are important products. Wood carving and the making of clocks and watches are important industries. Many tourists visit this region every year to enjoy the scenery.

XI. **Austria-Hungary.**—These two countries are under one government, although the people are quite different in many ways. Vienna, the capital and largest city, is situated on the beautiful Danube River. Wheat and flax are grown in large quantities.

XII. **Greece.**—The early civilization of this country has greatly influenced the modern world by its literature, art and architecture. Athens is the chief city and the seat of this ancient civilization. The country is mountainous, but produces fruits and furnishes grazing land.

XIII. **Turkey.**—Constantinople is the chief city and capital of the worst governed country of Europe. It is an excellent seaport and the site of numerous mosques. The Turks are principally Mohammedans and dislike the Christians very much. Roumania, Servia, Bulgaria, Montenegro and Greece have all rebelled against Turkey and formed separate governments. Farming, herding and fruit raising are all important in these countries.

XIX. ASIA.

Physical Geography.—Numerous peninsulas and islands abound along the irregular coast line of this continent. The main mountain systems have an east and west trend. Among the important mountains are the Himalayas, the highest mountains in the world. North of these are the lofty plateaus. These high mountains rob the winds of their moisture so that the interior contains the large desert of Gobi. From the plateau region the rivers flow to the north, south and east. The inhabitants are found chiefly in the eastern and southern parts of the continent.

I. **Southwestern Asia.**—Palestine, the home of the Jews, has had a great deal to do toward the civilization of the world. This is the birthplace of Christ and the home of the Christian religion. The ancient Jerusalem is still in existence. It is now a part of the Turkish Empire.

Turkey, Arabia and Persia have a very dry climate. Much of the land is desert. Dates and coffee are grown here. The Arabs wander from place to place in search of pasture for their flocks and herds. Many beautiful shawls and rugs come from Persia and Arabia.

These countries are lacking in roads, telegraph lines and railroads of civilized nations. Goods are carried by caravans.

II. **Siberia.**—This is a region of extensive plains crossed by large rivers, but the northern portion is so cold that it is of little value. Many Russian prisoners are sent here as exiles. Between the deserts in the southwest and the frozen tundras of the north is a region suited to farming and grazing. The Trans-Siberian Railway extends completely across Siberia from west to east.

III. **China and Korea.**—China has a civilization that dates back thousands of years. Such things as gunpowder, paper, printing, porcelain dishes and firecrackers were known to these people long before Europeans knew of them. As a result of the custom of thinking of the past rather than the future, China ceased to improve as other nations did. Of late they have had an awakening and the nation has become quite changed. It is no longer an empire, but a republic fashioned after our own. Canton is an important city and is in the region of the silk industry. In the north and west are large desert areas. The great mass of people are along the rivers and near the coast. It is an agricultural country, producing wheat, rice, millet and tea, principally.

Korea is an unprogressive region which is now under the rule of Japan.

IV. **Japan.**—This is an island empire supporting a thrifty, progressive people. The islands are mountainous and contain several volcanoes. The Japanese are skillful workmen and produce many beautiful screens, parasols, fans and napkins which find their way into our stores. Silk, rice, tea and matting grass are the chief products. The chief seaport is Yokohama. Tokio is one of the large cities of the world.

V. **India and Indo-China.**—India is a region of great rainfall and dense vegetation for the most part. Many large rivers water the land. Cotton, wheat and opium are the chief crops. Indo-China, the peninsula of the far east, is an important region for the production of spices, such as cinnamon and nutmegs. This region as well as India is the home of wild animals, such as tigers, which are dreaded by the natives. India is under the rule of the British Empire. The island of Ceylon is well known for its tea. Siam is much like China in many respects.

XX. AFRICA.

The Dark Continent.—This is one of the oldest continents, yet it is the least known. The desert on the north, the dense forests, the impassible rivers, the fierce animals and savage inhabitants have helped to keep it the "Dark Continent."

Northern Africa.—Egypt has long been settled by the white race. The greater part of it is desert, but a portion is watered by the Nile River and is very productive. The mud from the overflow of the Nile keeps the soil fertile. The Sahara Desert furnishes few homes for man or animals. It can be crossed by camels only with difficulty. The Suez

canal is in the eastern part of this region. The city of Cairo and the pyramids near by are well known to travelers.

Central Africa.—This region is not well known and until a few years ago had not been visited by white men. The natives are blacks. In the north is the Soudan, which changes from a desert where it borders on the Sahara to a dense tropical region in the south. In the latter region are hardwoods and elephants. From the latter we get the ivory tusks.

South Africa.—This is somewhat developed on account of the mining for gold and diamonds. Farming is carried on to quite an extent. From this industry we get such products as grain, wool, hides and ostrich feathers. This region has many railways and good wagon roads.

XXI. AUSTRALIA, THE EAST INDIES, PHILIPPINES, AND THE OTHER ISLANDS OF THE PACIFIC.

I. **Australia.**—This is the smallest continent, being about the size of the United States. It is under the rule of Great Britain. The main portion of this continent is a low plateau with a mountainous border, having the chief mountain range on the eastern border. These mountains rob the winds of their moisture and make the greater part of the interior a desert. Many of the rivers dry up before reaching the ocean. The animals of this region are peculiar and unlike those of any other continent. Among them may be mentioned the kangaroo and the duckbill. The wild animals are of little commercial use. Sheep raising is the leading industry, while cattle, wheat, corn and fruits are also produced. Gold is an important mineral product. Melbourne is the largest city. The raw products go mainly to England. Tasmania and New Zealand are islands near Australia belonging to Great Britain. Their people and products are similar to those of Australia.

II. **The East Indies.**—The large number of islands between Asia and Australia are the crests of mountains sticking above the water. Java, one of the larger islands, produces fine coffee. Spices, sugar, valuable woods of various kinds and precious stones are obtained from these islands. These islands contain many active volcanoes. The natives are only partly civilized in most cases, and in many places they are reported to be cannibals.

III. **The Philippine Islands.**—Lying between the Japanese islands and the East Indies are the mountainous Philippines. They are now under the control of the United States. Schools have been established and everything possible has been done to make things better for the people there. Manila is the principal city. It is now a clean, well kept city, and contains relics of the Spanish occupancy. Valuable woods, minerals, sugar, hemp and tobacco are obtained from these islands. In some of these islands are people who are still savages.

IV. **Islands of the Pacific.**—There are thousands of islands in the various parts of the Pacific Ocean, among which we may mention the Fiji, Samoan, New Guinea and the Hawaiian islands. The Hawaiian

islands, a territory of the United States, are of volcanic origin and produce quantities of sugar and tropical fruits, on account of their warm climate. Honolulu is the chief city and capital. Kilauea is an active volcano visited by many tourists.

XXII. CALIFORNIA SUPPLEMENT.

Extent.—Ours is the second largest state in the Union.

Relief.—Death Valley is, in places, 263 feet below sea level, while Mt. Shasta and Mt. Whitney are over 14,000 feet above sea level. The Great Valley lies between the Coast Range on the west and the Sierra Nevada and Cascade Mountains on the east. The northern portion of the valley is called the Sacramento Valley and the southern portion is called the San Joaquin Valley. Many smaller valleys are found in the mountains and along the coast. Among the most important of these are the Russian River, Napa, Santa Clara, Salinas valleys and the plains of Los Angeles. The Yosemite is important for its scenery. San Francisco Bay is one of the best harbors in the world. San Diego Bay and Humboldt Bay form good harbors.

Drainage.—The Sacramento and the San Joaquin are the most important rivers. They drain the Great Valley, then unite and flow through the Carquinez Straits into the San Francisco Bay. These rivers are navigable for some distance inland. Other rivers of importance are the Russian, the Eel, the Klamath, and many rivers of the Sierras which are tributaries of the Sacramento-San Joaquin system. Most of these streams furnish water for power and for irrigation purposes. Lake Tahoe is an important summer resort.

Climate.—We have all the climates represented in North America, from the hot deserts to the cold mountain tops. Ordinarily we are free from extreme cold in winter and excessive heat in the summer. The winds from the ocean temper the climate so that the two seasons are the wet and the dry, or winter and summer. The storms come from the west, consequently the western slope of the mountains gets the greatest amount of moisture. North of San Francisco the rainfall is quite heavy, but south of there it is much lighter. In the high mountains they have snow in the winter instead of rain.

Industrial Development.—At first the chief products of California were cattle, grapes, figs and grain in sufficient quantity to supply the local demands. With the rapid settlement due to the discovery of gold, things changed by the building of railroads and the establishing of steamship lines so that agriculture became of great importance.

Agriculture.—In the great interior and some of the smaller valleys grain is the important product. All cereals are grown to some extent. Potatoes, asparagus, beans, onions and truck gardening are important on the delta lands. Sugar beets are an important product.

Fruit Raising.—Beginning at the time of the completion of the overland railroad, fruit growing has gradually increased in importance until at the

present time ours is the leading state in the fruit production. Fruits of nearly all common kinds are grown here. We produce nearly all of the oranges, figs and over half of the peaches grown in the United States. Prunes are an extremely important crop in different parts of the state.

Stock Raising.—At one time large herds of cattle roamed almost at will over the state, but now each farm has a few. Not many large herds exist as before. Fine horses and mules are raised in parts of California. Sheep, hogs, poultry and their products are valuable industries in various sections of the state. Ostrich feathers are produced near Los Angeles, San Jose, and Sacramento.

Manufacturing.—With the discovery of petroleum and the establishing of electric power plants in California, manufacturing is becoming more and more important. The manufactures include those dependent upon agriculture, such as flour, canned fruits, lumber and ships.

Mining.—From the discovery of gold in 1848, gold mining in California has become more and more important. It is found mostly in the Sierras. Silver is also found in paying quantities. Copper, quicksilver and other important minerals are found in different parts of the State. Petroleum has assumed great importance.

Lumbering.—In those portions of the mountains where there is an abundance of rainfall there are fine forests of such trees as pine, fir, spruce, redwood, cedar, and the giant *sequoia*. From Oregon to near Santa Cruz the redwood is found. The pine is the chief lumber tree of the Sierras. Sawmills are busily engaged in turning these trees into lumber.

Fisheries.—Many valuable food fishes are found in California fresh and salt waters. Some of these are natives and others have been supplied by the government. Several varieties of shell fish are also obtained. Salmon are caught in the fresh and the salt water.

Commerce.—California is connected with the East by means of railroads and with the outside world by steamship lines. On the former we ship large quantities of fruit, vegetables, wool, sugar and nuts. By ships we send cotton, barley and fruits, and receive silk, tea, coffee, rice, sugar and coal.

Cities.—San Francisco is the largest city and the chief seaport in California. In its shipyards some of the great battleships of our navy have been built. It manufactures various articles, among which may be mentioned mining machinery, refined sugar and flour. It has many points of interest, among which may be mentioned the Cliff House, the Golden Gate Park and the Ferry Building.

Los Angeles is second in size and importance and is the center of the great orange industry. It is a favorite resort for tourists on account of the mild climate and beautiful surroundings.

Oakland, being near San Francisco, is the home of many of the business men of the latter city. It is an important commercial city.

Sacramento is the capital and an important railroad center and shipping point for fruits and grain.

San Jose is in the fruit belt of the Santa Clara Valley.

San Diego is located on one of the best harbors in southern California. It is an important shipping center and winter resort.

Stockton, at the head of tidewater navigation of the San Joaquin, is the center of important truck gardening and other agricultural industries.

Alameda is chiefly a residence district.

Berkeley is the seat of the University of California.

Fresno is the center of the raisin industry.

Among the pleasure resorts of note are Santa Barbara, Santa Cruz and Pasadena.

Riverside and San Bernardino are in the southern orange belt.

Vallejo and Eureka are centers of important industries.

APPENDIX.

How to Make Touch Paper.

Take about a teaspoonful of potassium nitrate (saltpetre) or sodium nitrate (Chile saltpetre), add about four tablespoonfuls of water and stir till the greater part of the solid is dissolved. Dip into this pieces of blotting paper, or any common unsized paper, and as soon as it is thoroughly soaked with the liquid, remove it from the dish and place where it will dry. When thoroughly dry it should be cut into strips about half an inch wide and about two or three inches long. It is now ready for use and when lighted it burns slowly and produces a dense white smoke.

How to Make a Paper Windmill.

Cut out a piece of paper (scratch paper works well) about five or six inches square. Make two lines diagonally across the center connecting opposite corners. Following around the border, number on each side of the points where the diagonal lines cut the corners of the square consecutively 1, 2, 3, 4, 5, 6, 7, 8. With a sharp knife or a pair of scissors, cut along the diagonal lines to within about a half an inch of the point where the two lines cross (or the center of the paper). You now have eight corners instead of four. Taking every other corner, *i. e.*, numbers 1, 3, 5, 7, bend them over to the center (but do not crease them) and pass a pin through them near the point of the strips and through the center of the paper (where the lines intersect). Now drive the pin into a small stick and the windmill is complete. Blow against it and see that it works easily.

Elementary Study of Weather Maps.

Men have watched the storms as they occur at different places in the United States and have found that they come in from the Pacific Ocean and travel eastward. In order that we may know where the storms are and when another may come, when it is going to freeze, and such facts, the United States Weather Bureau has been established. They print outline maps of the United States and locate the storms on them so that we can see at a glance where the storm is. The center of the storm is marked "L O W." (The teacher should have a map for each pupil or enough so that all can look at weather maps. The daily weather maps can be obtained from the United States Weather Bureau at San Francisco, for the asking.) Look at your maps and find a storm center. Sometimes it may be raining, snowing, or just cloudy and windy at the storm center. The wind always blows toward the "L O W." Notice some small circles with arrows pointing away from them. They usually point toward the "L O W." Inside of the circle you will notice certain letters which are explained in the lower left-hand corner of the map. Look at the arrow-circles near the "L O W"

on your map. What do you find inside of the circle? Beside the circle you will notice some figures. These are also explained in the lower left-hand corner of the map. How fast is the wind blowing near the "L O W?" How much rain has fallen? How warm or how cold has it been? Below the map on the left you will note what the "weather man" has to say about the weather for the day following. Keep track of the weather from day to day and make a record as suggested at the bottom of page 85 of the State Series Introductory Geography.

Teachers' References.—Tarr, New Physical Geography, pp. 426–427. Fairbanks, Practical Physiography, pp. 487–496.

Any other good book on Physical Geography will give the information desired.